PROVINCE OF BRITISH COLUMBIA
MINISTRY OF ENVIRONMENT, LANDS AND PARKS
VANCOUVER ISLAND REGION

# SAANICH-VICTORIA

## WATER ALLOCATION PLAN

**APRIL 1994**


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## 1.0 INTRODUCTION

The Water Management Program's goals are to sustain a healthy water resource through anticipating and planning for water uses. Water Allocation Plans are a means of identifying water demands and ensuring that water use is compatible with the goals of a sustainable environment. The advantages are:

1. Water Managements position on water allocation decisions is available to applicants and the public.

2. Response time is reduced.

3. Eliminates the need for individual studies and reports on each application.

4. Consistency of decisions are improved.

5. Specific allocation directions and decisions are defined.

6. Plans are more comprehensive.

7. Eliminates the need for referrals on individual applications.

The following regional policy was developed to provide direction:

**Regional Policy:**

**The region shall be subdivided into watershed areas and a water allocation plan shall be prepared for each watershed area. Water licence decisions will be made in accordance with approved plans.**

Assessments undertaken as part of the water allocation planning process include identifying the surface water resources available, the instream requirements for fish, the existing and potential licensable water demands and providing direction regarding further water licence allocations.

Input may be sought from other agencies. Referrals go to Federal & Provincial Fisheries agencies and to Water Management in Victoria.

The Saanich-Victoria Water Allocation Plan area is shown in Figure 1.

Figure 1: Saanich-Victoria Water Allocation Plan Area

## 2.0 GENERAL WATERSHED INFORMATION

### 2.1 Plan Area

The Saanich-Victoria plan area covers the southeastern tip of Vancouver Island including the surrounding islands. The total area of the plan is 346.20 $km^2$. Eleven major watersheds have been defined representing 52.0% of the plan area. The remaining area of the plan is represented by; Urban Victoria (17.5%); the surrounding Islands of Pier, Coal, James and Sydney (4.0%); and other minor watersheds (26.5%).

| Water Allocation Plan Areas | | |
|---|---|---|
| Drainage | Size ($km^2$) | % Area |
| Chalet Creek | 2.99 | 0.9 |
| Airport Creek | 5.81 | 1.7 |
| Hagan Creek | 14.86 | 4.3 |
| Sandhill Creek | 13.34 | 3.9 |
| Noble Creek | 8.80 | 2.5 |
| Tod Creek | 22.80 | 6.6 |
| Colquitz River | 45.56 | 13.2 |
| Burnham Brook | 2.51 | 0.7 |
| Millstream | 28.96 | 8.4 |
| Craigflower Creek | 24.79 | 7.2 |
| Colwood Creek | 9.19 | 2.6 |
| Urban Victoria | 60.40 | 17.5 |
| Sydney Island | 8.44 | 2.4 |
| James Island | 3.08 | 0.9 |
| Coal Island | 1.43 | 0.4 |
| Pier Island | 1.08 | 0.3 |
| Other Areas | 92.18 | 26.5 |
| **Total Area** | **346.22** | **100.0** |

Source: Measured By Planimeter from 1:50000 NTS Maps

## 2.2 Topography and Climate

The plan area includes three main topographically variable areas, namely; Saanich Peninsula, Highlands and Victoria-Colwood. The topography of the Saanich Peninsula is predominantly characterized by lowlands. The Highlands is distinguished by its steep rocky terrain. Included in the Highlands area are Mount Work and Jocelyn Hill their elevations are 446 m and 434 m, respectively. The topography of Victoria-Colwood is characterized by rolling rocky hills and rock outcroppings. Elevation in the plan area can vary from 446 m (Mount Work) to sea level.

The climate of the Saanich-Victoria plan area can be described as the Cool Mediterranean type. The characteristics of this type of climate are cool, relatively dry summers and cold wet winters.

The climate records for Victoria Gonzales Heights Station (elev. 69 m) indicate that the lowest average mean daily temperature is in January and is 4.1°C; with a mean daily maximum temperature of 6.1°C and a mean daily minimum temperature of 2.1°C. The highest average mean daily temperature is in July and is 15.4°C; with a mean daily maximum temperature of 19.7°C and a mean daily minimum temperature of 11.1°C.

The climate records for Saanichton CDA station (elev. 61 m) also indicate similar conditions. The lowest average mean daily temperature is in January and is 3.1°C; with a mean daily maximum temperature of 5.6°C and a mean daily minimum temperature of 0.5°C. The highest average mean daily temperature is in July and is 16.5°C; with a mean daily maximum temperature of 21.6°C and a mean daily minimum temperature of 11.3°C. See Appendix A for climatic normals and precipitation records for the period of 1951 to 1980.

## 2.3 History and Growth

Hudson Bay Company selected Victoria as its trading post on March 14, 1843. Victoria's population totalled about 450 people at the time. With the discovery of gold in the Cariboo in 1858, Victoria became the transient and outfitting port for the Cariboo gold fields. Its population grew rapidly. Today, Victoria and Greater Victoria have become the most heavily populated and urbanized area on Vancouver Island. Land use is primarily urban however, there are areas of light industry, agriculture and small pockets of undeveloped land. The following table highlights population growth over the past 17 years.

**Population Growth In Municipalities**

| Year | 1978 | 1981 | 1984 | 1987 | 1990 | 1993 | % Incr |
|---|---|---|---|---|---|---|---|
| North Saanich | 5407 | 6307 | 7022 | 7864 | 9551 | 10691 | 108.6 |
| Sydney | 6737 | 8186 | 9053 | 9438 | 10070 | 10467 | 55.3 |
| Central Saanich | 8723 | 10186 | 11345 | 12248 | 13615 | 15053 | 72.6 |
| Saanich | 76734 | 81262 | 84131 | 88758 | 96408 | 101993 | 32.9 |
| Victoria | 66335 | 66466 | 67780 | 70126 | 72023 | 73874 | 11.4 |
| Oak Bay | 17713 | 17518 | 17346 | 17777 | 18140 | 18413 | 4.0 |
| Esquimalt | 16341 | 10186 | 16539 | 16671 | 16850 | 17398 | 8.7 |
| View Royal | | | | | 6062 | 6302 | 3.4 |
| Colwood | | | | 12229 | 13589 | 14293 | 16.9 |
| Langford | | | | | | 15878 | |
| **Total Pop.** | **243428** | **257320** | **267863** | **277603** | **298003** | **313714** | **31.0** |

Source: B.C. Stats

The average population growth in the plan area for the 1978-1993 period was 31%. North Saanich Municipality had the highest population increase (108.6%) and Oak bay Municipality the lowest (4.0%) for the period.

The following table projects the population growth over the next 25 years:

**Population Forecasts In Municipalities**

| Year | 1995 | 2000 | 2005 | 2010 | 2015 | 2020 |
|---|---|---|---|---|---|---|
| North Saanich | 11737 | 14824 | 18722 | 23646 | 29864 | 37717 |
| Sydney | 10998 | 12450 | 14093 | 15953 | 18058 | 20441 |
| Central Saanich | 16310 | 19929 | 24352 | 29756 | 36360 | 44429 |
| Saanich | 105661 | 115400 | 126043 | 137668 | 150364 | 164231 |
| Victoria | 75076 | 78166 | 81383 | 84733 | 88221 | 91852 |
| Oak Bay | 18446 | 18529 | 18613 | 18697 | 18781 | 18866 |
| Esquimalt | 17642 | 18269 | 18917 | 19588 | 20284 | 21004 |
| Veiw Royal | 6523 | 7111 | 7751 | 8450 | 9211 | 10040 |
| Colwood | 14795 | 16127 | 17580 | 19164 | 20890 | 22772 |
| Langford | 16435 | 17916 | 19530 | 21289 | 23207 | 25297 |
| **Total Pop.** | **324726** | **353978** | **385864** | **420623** | **458513** | **499817** |

Forecast based on population growth trend (1978-1993)

The total population in the plan area is forecasted to approach 500,000 people by the year 2020.

### 2.4 Significant Watershed Areas

For the purpose of assessing water supplies for allocation demands, the following drainage areas were identified and the drainage areas determined.

Significant Drainage Areas

| Drainage | Drainage Area $km^2$ |
|---|---|
| Colwood Creek | 9.2 |
| Millstream Creek | 29.0 |
| Craigflower Creek | 24.8 |
| Tod Creek | 22.8 |
| Colquitz River | 45.6 |
| Burnham Brook | 2.5 |
| Noble Creek | 8.8 |
| Sandhill Creek | 13.3 |
| Hagan Creek | 14.9 |
| Airport Creek | 5.8 |
| Chalet Creek | 3.0 |

These drainage areas are delineated in Figure 2.

Figure 2: Saanich-Victoria Drainage Areas

## 3.0 HYDROLOGY

### 3.1 Precipitation

There are 14 Atmospheric Environment Service (AES) climatic stations within the Saanich-Victoria Water Allocation Plan area. The Canadian Climatic Normals 1951-1980 data is provided in Appendix A. The average of the mean monthly precipitation normals (1951-1980) is illustrated in Figure 3.

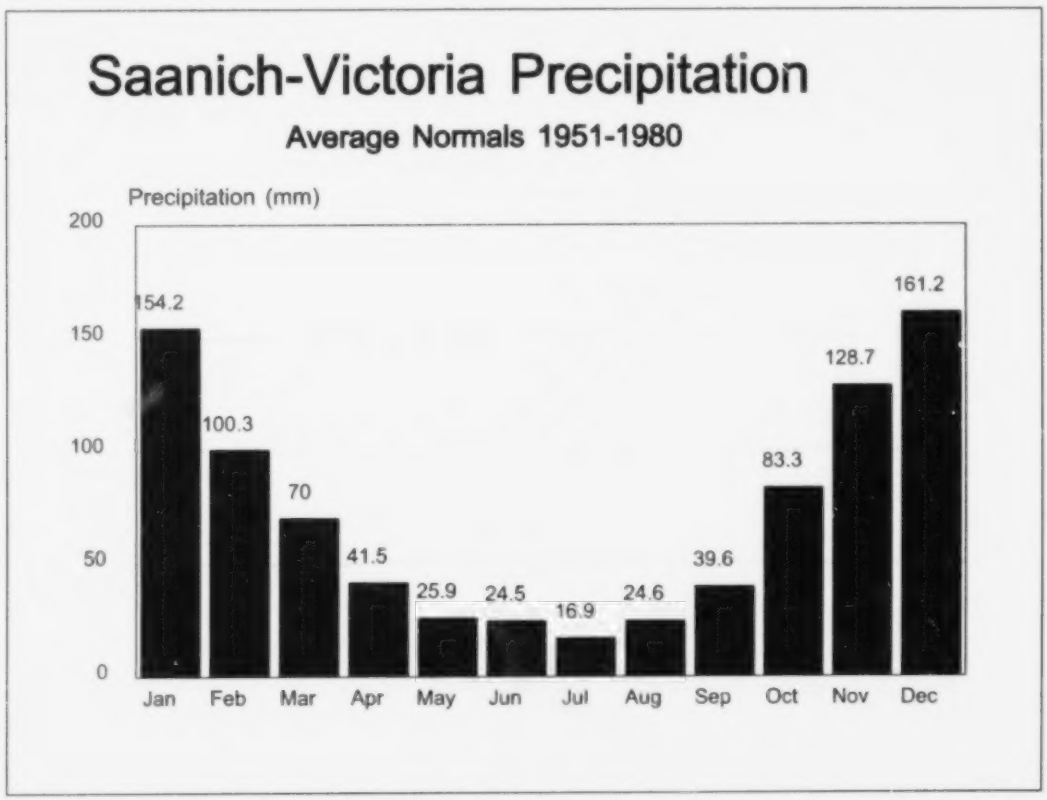



**Figure 3: Saanich-Victoria Precipitation Normals**

### 3.2 Hydrometric Information

There are three Water Survey of Canada (WSC) hydrometric stations within the Saanich-Victoria Water Allocation Plan area which have been operated on an annual basis, namely; Craigflower Creek below Burnside Road (08HA034), Colquitz River at Hyacinth Road (08HA037) and Colquitz River at Violet Avenue (08HA047). There are also

three Water Survey of Canada (WSC) hydrometric stations within the Saanich-Victoria Water Allocation Plan area which have been operated on a seasonal basis, namely; Pelky Spring near Saanichton (08HA007), Noble Creek at the Mouth (08HA028) and Tod Creek below Prospect Lake (08HA054). The following table lists the WSC stations and the period of record, drainage area, mean annual discharge and minimum daily discharge:

**Water Survey Canada Hydrometric Discharge Stations**

| Station Name | Station Number | Period of Record | Drainage Area ($km^2$) | Mean Annual Discharge ($m^3/s$) | Minimum Daily Discharge ($m^3/sec$) |
|---|---|---|---|---|---|
| Craigflower Creek below Burnside Road | 08HA034 | 1974-81 | 21.4 | 0.307 | 0.0 |
| Colquitz River at Hyacinth Road | 08HA037 | 1976-81 | 30.7 | 0.354 | 0.0 |
| Colquitz River at Violet Avenue | 08HA047 | 1981-90 | 42.6 | 0.567 | 0.019 |
| Pelky Springs near Saanichton | 08HA007 | Feb-Jun 1949 | - | - | 0.0 |
| Noble Creek at mouth | 08HA028 | Apr-Sep 1971-72 | 8.8 | - | 0.007 |
| Tod Creek below Prospect Lake | 08HA054 | Apr-Sep 1982-90 | 9.04 | - | 0.0 |

There is also, within the plan area, one Water Survey of Canada (WSC) hydrometric station operated on a seasonal basis with lake levels, namely; Prospect Lake in Saanich (08HA053).

The Water Survey Canada hydrometric station discharge and lake water level records are summarized in Appendix B.

Figure 4: WSC Stations and Provincial Flow Measurement Locations.

In addition there are miscellaneous stream flow measurements and water level and volume measurements available from Regional Engineer's Reports related to water licenses, Fish and Wildlife bathymetric surveys and provincial low flow monitoring studies (1977, 1985, 1992). In particular there are water level data on Elk-Beaver Lake, discharge at the outlet of Elk-Beaver Lake and streamflow for Farley Creek in Central Saanich. Figure 4 illustrates the location of the WSC stations and provincial low flow records.

The discharge runoff per square kilometre was estimated from the mean monthly and mean annual records for each WSC hydrometric station for the period of record. The average annual discharge runoff and average monthly discharges runoff per square kilometre were used to estimate the mean monthly discharges (MMD) and mean annual discharge (MAD) in all identified significant drainages which lacked annual discharge records within the Saanich-Victoria Water Allocation Plan area. These estimated discharge runoff per square kilometre are in the following table:

**Discharge Runoff per Square Kilometre (litres/second/Km$^2$)**

| Station Number* | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | MAD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08HA034 | 41 | 39 | 24 | 10 | 3 | 2 | 0 | 1 | 1 | 1 | 12 | 52 | 14 |
| 08HA037 | 21 | 34 | 18 | 8 | 3 | 3 | 1 | 1 | 1 | 1 | 9 | 35 | 12 |
| 08HA047 | 39 | 29 | 16 | 10 | 5 | 3 | 2 | 2 | 2 | 4 | 22 | 28 | 13 |
| 08HA028 | | | | 11 | 3 | 1 | 1 | 1 | 2 | | | | |
| 08HA054 | | | | 16 | 4 | 1 | 0 | 0 | 0 | | | | |
| Average | 34 | 34 | 19 | 11 | 4 | 2 | 1 | 1 | 1 | 2 | 14 | 38 | 13 |
| % MAD | 262 | 262 | 146 | 85 | 31 | 15 | 8 | 8 | 8 | 15 | 108 | 292 | 100 |

* Note: The drainage area of Pelky Springs near Saanichton (08HB007) could not be determined and therefore was not included.

For each identified significant drainage area without annual discharge records, the average discharge runoff per square kilometre noted in the above table were multiplied by the drainage area to obtain a first estimate of the mean monthly discharges and mean annual discharge. The seasonal WSC hydrometric record on the Noble Creek and Tod Creek and the miscellaneous stream flow measurements were used to modify the estimated mean monthly discharges.

### 3.2.1 Colwood Creek

The estimated drainage area of Colwood Creek is 9.2 $km^2$ (3.6 $mi^2$).

Glen Lake is a significant lake in the headwaters of the drainage area. Glen Lake water level information was obtain by the provincial government from October 1979 to the end of 1982. The maximum recorded annual lake level variation is 0.81 metres (2.67 ft) in 1982. The lake level record is in Appendix C.

There are no flow measurements for Colwood Creek. The mean monthly discharge and mean annual discharge flow estimates are in the following table:

**Colwood Creek Mean Monthly and Mean Annual Discharge (litres/sec)**

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | MAD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 313 | 313 | 175 | 101 | 37 | 18 | 9 | 9 | 9 | 18 | 129 | 350 | 120 |

### 3.2.2 Millstream Creek

The estimated drainage area of Millstream Creek is 29.0 $km^2$ (11.2 $mi^2$). Florence Lake, Matson Lake, Mitchell Lake, Second Lake and Third Lake are significant lakes in the headwaters of the drainage area.

There are miscellaneous flow measurements for Millstream Creek for 1950 to 1954. The flow was measured from two to four times each year during the 1950 to 1954 period at Finlayson Road and at Atkins Road. Less than half the watershed is above Finlayson Road while more than 90% of the watershed is above Atkins Road. These flow measurements are listed in Appendix C. These miscellaneous flow measurements indicate that the flow in July, August and September may be less than the flow estimated using the average MMD per square kilometre. Therefore the average miscellaneous measured flows at Atkins Road for July, August and September from 1950 to 1954 were used and the remaining monthly discharge flows adjusted approximately 2% higher to compensate. The mean monthly discharge and mean annual discharge flow estimates are in the following table:

| Millstream Creek Mean Monthly and Mean Annual Discharge (litres/sec) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | MAD |
| 995 | 995 | 558 | 328 | 124 | 64 | 9 | 6 | 2 | 64 | 415 | 1108 | 377 |

### 3.2.3 Craigflower Creek

The estimated drainage area of Craigflower Creek is 24.8 $km^2$ (9.6 $mi^2$). Thetis Lake and McKenzie Lake drain into Craigflower Creek.

There are 8 years of flow discharge records (1974-1981) available for Craigflower Creek below Burnside Road (08HA034). These flow records are the best estimate of the flow discharge from the total drainage area. The following table summarizes the mean monthly discharge and mean annual discharge flow estimates:

| Craigflower Creek Mean Monthly and Mean Annual Discharge (litres/sec) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | MAD |
| 886 | 835 | 507 | 207 | 57 | 45 | 10 | 20 | 16 | 24 | 259 | 1120 | 307 |

The following figure illustrates the flow estimates:

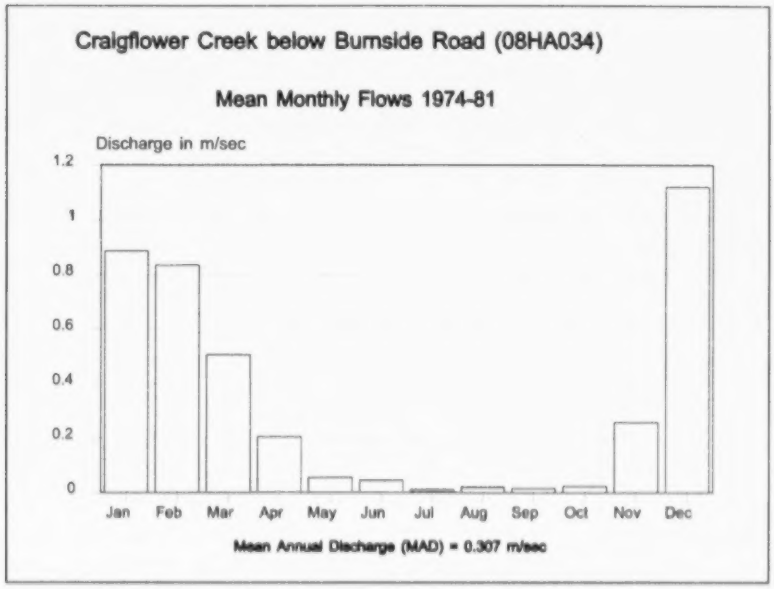



**Figure 5: Craigflower Creek below Burnside Road (08HA034)**

### 3.2.4 Tod Creek

The estimated drainage area of Tod Creek is 22.8 $km^2$ (8.8 $mi^2$). Maltby Lake, Prospect Lake, Durrance Lake and Quarry Lake are all in the Tod Creek drainage area.

There are 9 years of flow discharge records (1982-1990) available for Tod Creek below Prospect Lake (08HA054) for the April through September period. There are also miscellaneous flow measurements from August 1 to November 29, 1982 on Travers Creek; a tributary to Prospect Lake. Water levels are available on Prospect Lake (08HA053), Durrance Lake and Quarry Lake.

There is 6 years (1982 - 1987) of April through September water levels on Prospect Lake in Saanichton (08HA053). The maximum recorded annual lake level variation is 0.485 metres (1.59 ft) in 1988. The monthly flow summary for 1982 to 1990 is in Appendix C.

The flow records for Tod Creek below Prospect Lake (08HA054) are the best estimate of the natural flow discharge for the April through September period. However these flow discharge measurements represent only 38% of the total drainage area. Therefore the April to September MMD's have been multiplied by the proportion of the total drainage area over the hydrometric station drainage area (2.7). The mean annual discharge, which is estimated from the average annual WSC hydrometric station discharge

runoff per square kilometre, is assumed to be reliable. Therefore, the mean monthly discharge flows for October through March have been adjusted to compensate for the lower April to September flow. The mean monthly discharge and mean annual discharge flow estimates are in the following table:

| Tod Creek Mean Monthly and Mean Annual Discharge (litres/sec) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | MAD |
| 752 | 752 | 408 | 387 | 96 | 16 | 5 | 11 | 8 | 21 | 296 | 841 | 296 |

The following figure illustrates the mean monthly flow of Tod Creek below Prospect Lake (08HA054) and the estimated mean monthly discharge flow from the drainage area:

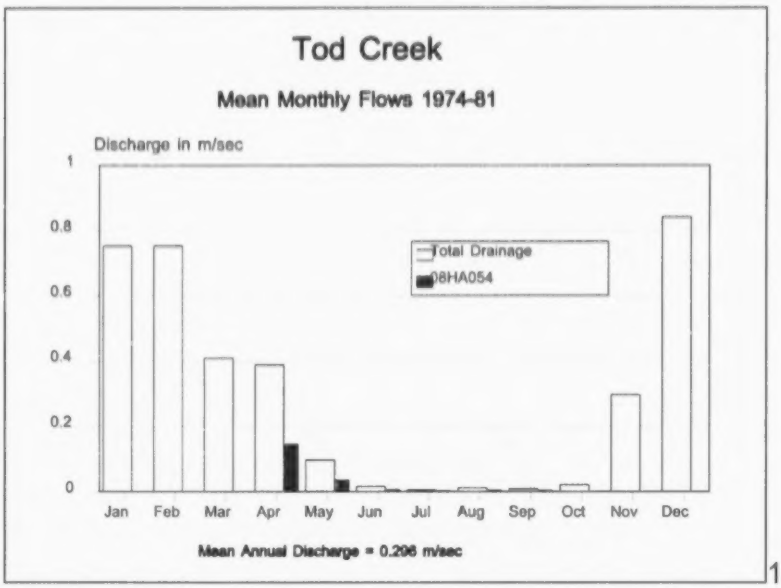



**Figure 6: Tod Creek Mean Monthly Flow**

### 3.2.5 Colquitz River

The Colquitz River is the largest drainage area within the plan area with an estimated drainage area of 45.6 $km^2$ (17.6 $mi^2$). Elk and Beaver Lakes at the head waters of the Colquitz River are the largest lakes in the plan area. Blenkinsop Lake flows by way

of Blenkinsop Creek into Swan Lake. Swan Lake flows by way of Swan Lake Creek into the Colquitz River at a point upstream of the mouth of the river in Portage Inlet. The flows from both Elk and Beaver Lakes and Blenkinsop Lake are regulated by weirs at the outlets. The regulated water levels of Elk and Beaver Lakes and Blenkinsop Lake and the flow release into Colquitz River are monitored and reported on a regular basis since 1987.

There are two Water Survey Canada hydrometric stations on the Colquitz River. Colquitz River at Hyacinth Road (08HA037) has approximately 6 years of annual flow discharge records (1976-1981) at a location just above the Swan Lake Creek confluence. This hydrometric station was relocated, in 1981, downstream to below the Swan Lake Creek confluence to Colquitz River at Violet Avenue (08HA047). There are approximately 9 years of annual flow discharge records up to 1990 for the Colquitz River at Violet Avenue (08HA047). The Colquitz River at Violet Avenue (08HA047) is near enough the mouth of the river that it represents the discharge of the drainage area. However the flow in the Colquitz River is regulated at both Beaver Lake and Blenkinsop Lake and therefore the recorded low flow is artificially higher than natural flow. The mean monthly discharge and mean annual discharge flow estimates for each hydrometric station and the estimated natural flow from the average discharge runoff per square kilometre noted above, are in the following table:

**Colquitz River Mean Monthly and Mean Annual Discharge (litres/sec)**

| Station | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | MAD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08HA037 | 638 | 1030 | 561 | 236 | 97 | 77 | 36 | 39 | 41 | 31 | 290 | 1080 | 354 |
| 08HA047 | 1650 | 1250 | 698 | 446 | 201 | 126 | 100 | 72 | 79 | 150 | 949 | 1190 | 567 |
| Natural | 1550 | 1550 | 866 | 502 | 182 | 91 | 46 | 46 | 46 | 91 | 638 | 1733 | 593 |

The following figure illustrates the mean monthly flow of the Colquitz River at Hyacinth Road (08HA037), Colquitz River at Violet Avenue (08HA047) and the estimated natural discharge flow from the drainage area:

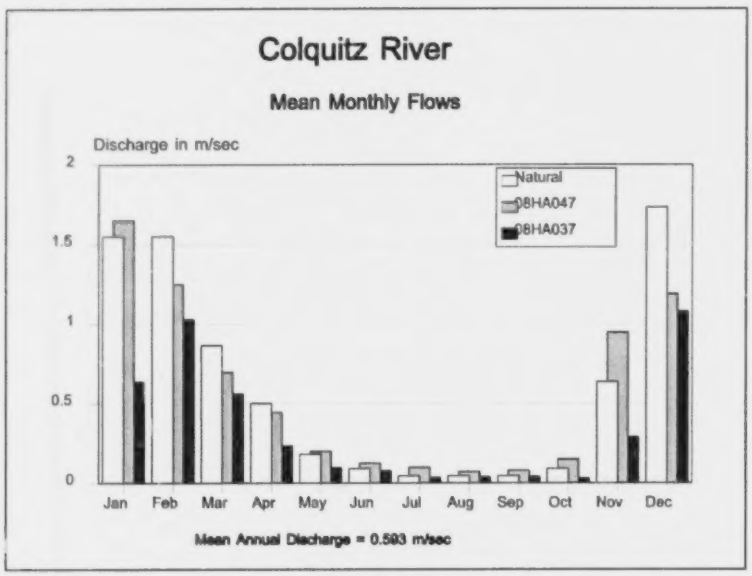



**Figure 7: Colquitz River Mean Monthly Flow**

### 3.2.6 Burnham Brook

The estimated drainage area of Burnham Brook is 2.5 $km^2$ (1.0 $mi^2$).

There are no flow measurements for Burnham Brook. The mean monthly discharge and mean annual discharge flow estimates are in the following table:

| Burnham Brook Mean Monthly and Mean Annual Discharge (litres/sec) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | MAD |
| 85 | 85 | 48 | 28 | 10 | 5 | 3 | 3 | 3 | 5 | 35 | 95 | 33 |

### 3.2.7 Noble Creek

The estimated drainage area of Noble Creek is 8.8 $km^2$ (3.4 $mi^2$).

There are two years (1971 and 1972) of April through September discharge flow measurements for Noble Creek at the Mouth (08HA028). The mean monthly discharge

flow records for the period of record were used as the best estimate of the flow for the April through September period. The mean monthly discharge flow for October through March and the mean annual discharge (MAD) are estimated from the average monthly and annual WSC hydrometric station discharge runoff per square kilometre. The mean monthly discharge and mean annual discharge flow estimates are in the following table:

| Noble Creek Mean Monthly and Mean Annual Discharge (litres/sec) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | MAD |
| 299 | 299 | 167 | 93* | 29* | 12* | 10* | 8* | 16* | 18 | 123 | 334 | 114 |

* Noble Creek at the Mouth (08HA028)

The following figure illustrates the mean monthly flow of Noble Creek.

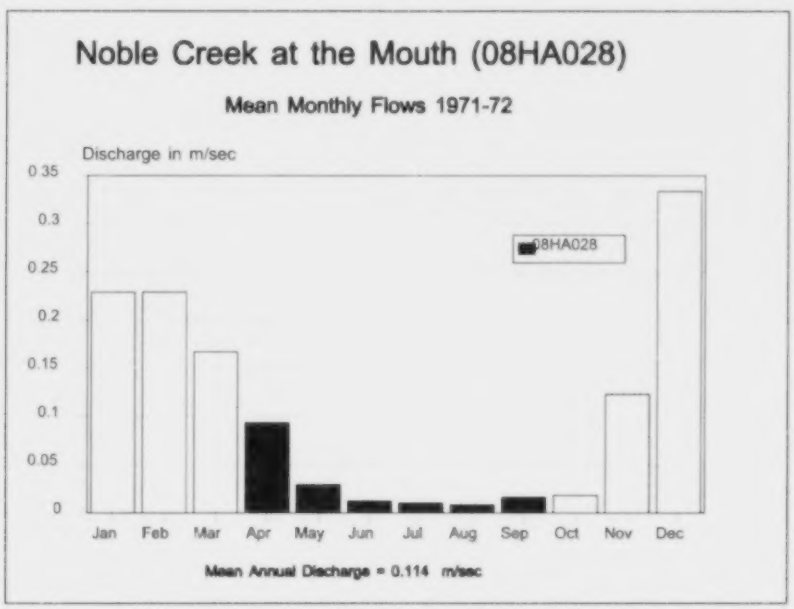



**Figure 8: Noble Creek Mean Monthly Flow**

### 3.2.8 Sandhill Creek

The estimated drainage area of Sandhill Creek is 13.3 $km^2$ (5.1 $mi^2$).

There are miscellaneous discharge flow measurements on Sandhill Creek in July to October of 1992, December 18, 1979 and July, August and September 1951-52. During the provincial low flow study of 1992 twelve flow measurements were made, using a current metre or Parshall flume, between July 21 and October 13. The location of the measurements, below the Pat Bay Highway, indicates that these flow measurements represent the discharge flow of less than half of the total drainage. The main tributary streams of Kennel Brook and Rashleigh Brook flow into Sandhill Creek below the 1992 measurement location. The minimum flow measured was 4 litres/sec on August 4, 1992. The estimated mean monthly flow for both August and September, 1992 is 7 litres/sec. The flow measured on December 18, 1979 was 322 litres/sec (11.72 cfs). In 1951-52 five flow measurements were made at both Keating Road and at tide water. There was zero flow at Keating Road for all five measurements. The average flow for all 5 discharge flow measurements at tide water, from late June to early September, was 13 litres/sec (0.45 cfs).

The above flow measurements indicate that the estimated average discharge runoff per square kilometre multiplied by the drainage area are a reasonable estimate of the mean monthly and mean annual flow in Sandhill Creek. The mean monthly discharge and mean annual discharge flow estimates are in the following table:

**Sandhill Creek Mean Monthly and Mean Annual Discharge (litres/sec)**

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | MAD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 452 | 452 | 253 | 146 | 53 | 27 | 13 | 13 | 13 | 27 | 186 | 505 | 173 |

### 3.2.9 Hagen Creek

The estimated drainage area of Hagen Creek is 14.9 $km^2$ (5.8 $mi^2$). There are miscellaneous discharge flow measurements on Hagen Creek in July to October of 1950 to 1952. These flow measurements were made at both West Saanich Road and at Godfrey Farm. The minimum flow measurement was 3 litres/sec (0.11 cfs) at West Saanich Road on August 11, 1951. The average of the flow measurements at Hagen Creek at Godfrey Farm was 12 litres/sec (0.43 cfs) and at West Saanich was 8 litres/sec (0.30 cfs).

There are also miscellaneous flow measurements, between 1980 and 1984, on Farley Creek, a main tributary to Hagen Creek.

The above flow measurements indicate that the estimated average discharge runoff per square kilometre multiplied by the drainage area are a reasonable estimate of the mean monthly and mean annual flow in Hagen Creek. The mean monthly discharge and mean annual discharge flow estimates are in the following table:

| Hagen Creek Mean Monthly and Mean Annual Discharge (litres/sec) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | MAD |
| 507 | 507 | 283 | 164 | 60 | 30 | 15 | 15 | 15 | 30 | 209 | 566 | 194 |

### .3.2.10 Airport Creek

The estimated drainage area of Airport Creek is 5.8 $km^2$ (2.2 $mi^2$). There are no flow measurements for Airport Creek.

The mean monthly discharge and mean annual discharge flow estimates are in the following table:

| Airport Creek Mean Monthly and Mean Annual Discharge (litres/sec) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | MAD |
| 197 | 197 | 110 | 64 | 23 | 12 | 6 | 6 | 6 | 12 | 81 | 220 | 75 |

### 3.2.11 Chalet Creek

The estimated drainage area of Chalet Creek is 3.0 $km^2$ (1.2 $mi^2$). There are no flow measurements for Chalet Creek.

The mean monthly discharge and mean annual discharge flow estimates are in the following table:

| Chalet Creek Mean Monthly and Mean Annual Discharge (litres/sec) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | MAD |
| 102 | 102 | 57 | 33 | 12 | 6 | 3 | 3 | 3 | 6 | 42 | 114 | 39 |

### 3.3 Other Small Drainages

There are numerous other small drainage areas within the plan area that are not noted above. These other small drainages are less significant and have either no discharge flow or very intermittent discharge flow from July through September. The average discharge runoff per square kilometre, noted in the table in Section 3.2, multiplied by the drainage area can be used to obtain an estimate of the mean monthly discharges and mean annual discharge.

### 3.4 Lake Volumes

The following table summarizes the area and volume of the lakes located in the Saanich-Victoria Water Allocation Plan area. These estimates are derived from bathymetric surveys by Water Management Branch and Fish and Wildlife Branch.

**.Lake Area and Volume Summary**

| | Surface Area (ha) | Maximum Depth (m) | Mean Depth (m) | Volume ($dam^3$) |
|---|---|---|---|---|
| Glen Lake | 18.1 | 14.0 | 6.4 | 156 |
| Third Lake | 3.5 | 4.9 | 2.4 | 85 |
| Second Lake | 6.5 | 9.4 | 2.8 | 180 |
| Mitchell Lake | 3.0 | 7.9 | 1.8 | 53 |
| Matson Lake | 3.4 | 3.0 | 1.7 | 58 |
| Teanook Lake | 3.3 | 7.6 | 2.4 | 78 |
| Florence Lake | 9.5 | 4.3 | 1.9 | 174 |
| Fork Lake | 3.8 | 9.1 | 2.9 | 109 |

| | Surface Area (ha) | Maximum Depth (m) | Mean Depth (m) | Volume ($dam^3$) |
|---|---|---|---|---|
| Fizzle Lake | 46.1 | 11.6 | 4.5 | 208 |
| Pike Lake | 7.4 | 9.0 | 3.7 | 278 |
| Prior Lake | 5.9 | 5.0 | 2.6 | 156 |
| McKenzie Lake | 2.9 | 5.0 | 2.2 | 65 |
| Thetis lake | 35.5 | 9.0 | 2.8 | 987 |
| Maltby lake | 7.1 | 8.0 | 4.1 | 292 |
| Prospect Lake | 72.0 | 12.3 | 6.9 | 5023 |
| Kilarney Lake | 22.3 | 4.6 | 2.4 | 543 |
| Durrance Lake (pipe invert - elev. 127.65m) | 5.0 | 12.2 | 10.1* | 332 |
| Durrance Lake (spillway invert - elev. 132.27m) | 10.0 | 16.6 | 9.5* | 627 |
| Quarry lake | 1.1 | 25.9 | 18.2* | 131 |
| Elk/Beaver Lake (dam invert - elev. 59.03m) | 219.0 | 10.7* | 10.7* | 15445 |
| Elk/Beaver Lake (crest of dam - elev. 60.54m) | 246.8 | 11.7* | 11.7* | 18934 |
| Blenkinsop Lake (dam invert - elev. 24.89m) | 7.9 | 2.9 | 2.0* | 102 |
| Blenkinsop Lake (crest of dam - elev. 25.77m) | 11.3 | 3.7 | 2.6* | 181 |
| Swan Lake | 9.8 | 6.0 | 2.4 | 238 |

Depths are measured from outlet/invert unless stated otherwise.
* mean depth = volume/surface area

### .3.5 Evaporation

The net evaporation for the plan area is estimated in the following table:

**Net Evaporation Loss**

| | Saanich-Victoria 1951-80 Precipitation (mm) | Saanichton CDA 1960-90 Mean Evaporation (mm) | Net Evaporation Loss (mm) |
|---|---|---|---|
| Jan | 164.7 | 33.4 | -131.3 |
| Feb | 105.5 | 8.3 | -97.2 |
| Mar | 73.1 | 29.5 | -43.6 |
| Apr | 42.4 | 57.5 | +15.1 |
| May | 26.0 | 86.9 | +60.9 |
| Jun | 25.5 | 99.5 | +74.0 |
| Jul | 17.5 | 114.0 | +96.5 |
| Aug | 25.5 | 92.5 | +67.0 |
| Sep | 40.4 | 61.1 | +20.7 |
| Oct | 87.1 | 30.5 | -56.6 |
| Nov | 137.3 | 13.9 | -123.4 |
| Dec | 172.5 | 10.1 | -162.4 |
| Total | 917.5 | 637.2 | -280.3 |

* January evaporation of 33.4 mm may be high because it is based on 3 years of records only 1971-73 of which, January 1971 evaporation of 86.2 mm was exceptionally high.

The net evaporation loss during the period between April through September is 334.2 mm (1.1 ft).

## 4.0 INSTREAM FLOW REQUIREMENTS

Maintaining the natural stream environment and instream uses is of paramount importance for present and future generations. Maintaining water for the fisheries resource is a key factor in maintaining instream flow requirements for water quality, other wildlife, recreational, aesthetic and cultural values. The Ministry of Environment Provincial policy is:

> **In situations where a water allocation decision will significantly impact instream uses of water, the comptroller or regional water manager may refuse the application or include water licence conditions to protect the instream use.**

Instream fisheries flow requirements are based on a provincially modified version of the Tennant (Montana) Method.

| Modified Tennant (Montana) Method Instream Flow Requirements | |
|---|---|
| **Flows** | **Description** |
| 30-60% MAD | Excellent spawning/rearing |
| 20-30% MAD | Good spawning/rearing |
| 10-20% MAD | Fair spawning/rearing |
| 5-10% MAD | Poor spawning/rearing |
| >5% MAD | Severely degraded spawning/rearing |

In drainages where fish are present, the minimum flow required to sustain the fisheries resource for fair spawning and rearing habitat is 10% of the Mean Annual Discharge (MAD). Therefore, the Regional policies to implement the Provincial policy are:

> **The minimum flow required to sustain the fisheries resources for spawning and rearing is 10% of the Mean Annual Discharge (MAD); unless a more rigorous analysis indicates a different minimum flow requirement.**
>
> **For streams where the natural mean monthly flow falls below 10% of the MAD, extractive licensed demands should only be allowed for the period of months when the mean monthly flow is above 60% of the MAD**
>
> **For streams where the mean 7-day average low flow falls below 10% of the MAD, extractive demands should only be allowed for the period of months when the mean monthly flow is above 60% of the MAD. Where the mean 7-day average low flow remains above 10%, then the 7-day low flow amount**

**above 10% MAD is available**

**Withdrawals from natural water bodies (lakes, ponds, swamps and marshes) supporting natural fisheries resources shall not reduce the shoal area more than 10%.**

The shoal area is the area from the lake shore at average summer level to a 6 metre depth.

The flows in all of the streams in the Saanich-Victoria Water Allocation Plan area are naturally limiting to fish production and maintenance of fish habitat. Fish have been identified in most significant drainage area stream channels and lakes. Species of fish found in the plan area include Coho Salmon, Chum Salmon, searun and resident Cutthroat Trout, Rainbow Trout, Bass, Pumpkinseed, Stickleback, Brown Bullhead and Scalpins. Figure 9 illustrates the identified fish habitat.

Elk/Beaver Lake, Colwood Lake, Glen Lake, Fork Lake, McKenzie Lake, Thetis Lake, Florence Lake, Prospect Lake and Durrance Lake are all stocked with fish to support the sport fishery. Elk/Beaver Lake supports the heaviest lake sport fishery on southern Vancouver Island.

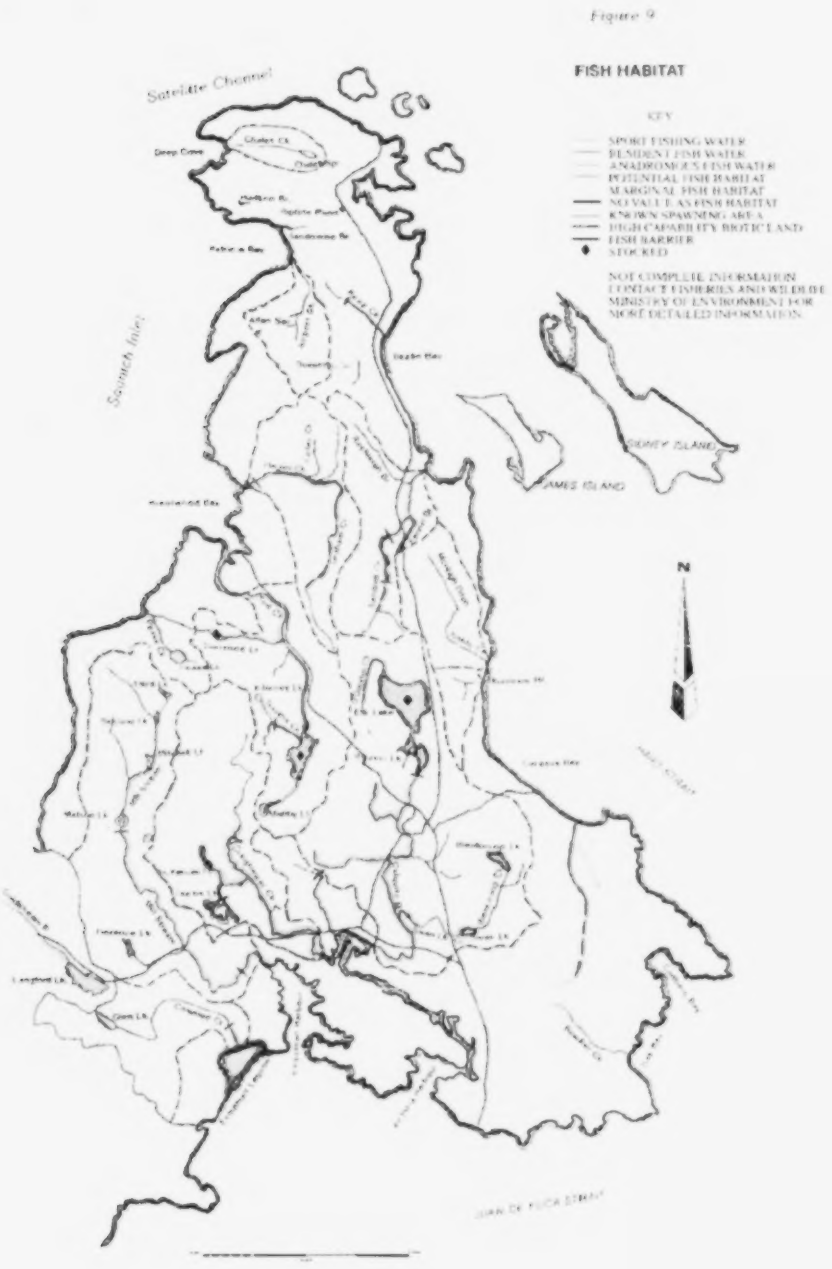
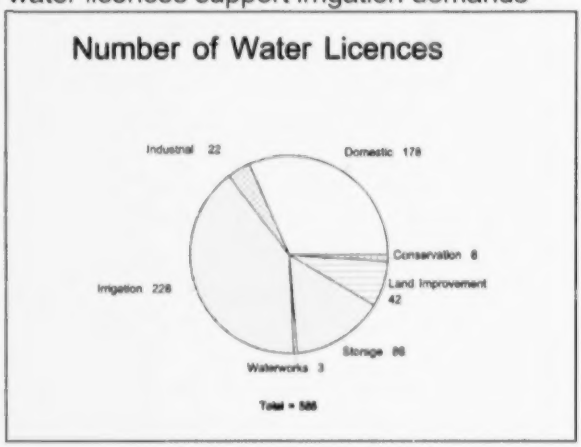



Figure 9: Fish Habitat

## 5.0 LICENCED WATER DEMAND

There are 565 water licenses currently (April 1994) within the Saanich-Victoria Water Allocation Plan area. The largest number of water licences support irrigation demands (228 water licences) and rural residential domestic demands (178 water licenses) which reflect the rural agricultural nature of the Saanich Peninsula. Figure 10 illustrates the number of existing water licences issued for each purpose within the plan area. In addition to irrigation and domestic purpose there are 86 water licenses for storage purpose, 42 water licences for land improvement purpose, 22 water licenses for various industrial purposes, 6 water licenses for conservation purpose and 3 water licences for municipal waterworks purpose.




**.Figure 10: Number of Water Licences**

The total licensed average annual demand within the Saanich-Victoria Water Allocation Plan area is 10,429 $dam^3$ (8,455 acre-feet). Figure 11 illustrates the average annual licenced water demands for each purpose for which water licences have issued within the plan area. A summary of the licensed demand by purpose is provided in Appendix E.

The largest licenced annual water demand in the plan area is for land improvement purpose (5,500 $dam^3$); followed by irrigation purpose (2,160 $dam^3$), waterworks purpose (1,106 $dam^3$), storage purpose (925 $dam^3$), industrial purpose (567 $dam^3$), domestic purpose (104 $dam^3$) and finally conservation purpose (67 $dam^3$).

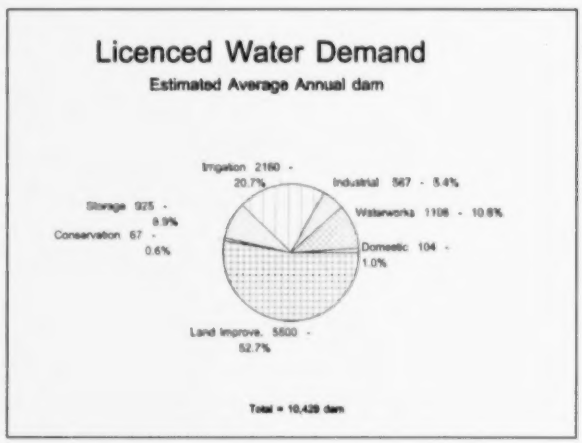

Licenced Water Demand
Estimated Average Annual dam
Irrigation 2160 - 20.7%
Industrial 567 - 5.4%
Storage 925 - 8.9%
Waterworks 1106 - 10.6%
Conservation 67 - 0.6%
Domestic 104 - 1.0%
Land Improve. 5500 - 52.7%
Total = 10,429 dam

**Figure 11: Licensed Water Demand**

The following table summarizes these annual water demands.

## Average Annual Licensed Demand

| Purpose | No. of Lic. | Licensed Quantity | Average Annual Licensed Demand dam$^3$* |
|---|---|---|---|
| Municipal Waterworks | 3 | 243,250,000 gpy | 1,106 |
| Domestic | 178 | 124,800 gpd | 104 |
| Industrial | | | |
| Water Bottling | 2 | 9,500 gpd | 16 |
| Cold Storage Cooling | 1 | 19,000 gpd | 32 |
| Stock Watering | 1 | 2,500 gpd | 4 |
| Tree Spraying | 4 | 179 acft | 221 |
| Fish Culture Ponds | 7 | 8.4 acft | 10 |
| Golf Course Watering | 6 | 95.8 acft | 118 |
| Gravel Washing | 1 | 100,000 gpd | 166 |
| Subtotal | 22 | | 567 |
| Irrigation | 228 | 1,751.215 acft | 2,160 |
| Storage | 86 | 749.92 acft | 925 |
| Land Improvement | | | |
| Impoundments | 20 | 4,452.94 acft | 5,493 |
| Diversions | 11 | 4,420 gpd | 7 |
| Works | 11 | 0.0 (total flow) | 0 |
| Subtotal | 42 | | 5,500 |
| Conservation | | | |
| Impoundments | 4 | 51 acft | 63 |
| Works | 2 | 3 acft | 4 |
| Subtotal | 6 | | 67 |
| Total | 565 | | 10,429 |

* Based on the following assumptions:
Municipal waterworks demand and domestic demand is the authorizes maximum daily licenced divided by 2 to estimate the average daily demand and multiplied by 365 days for an annual demand; except where a municipal waterworks annual allowable is specified in the water licence;
Industrial and land improvement licenced gpd demand is a uniform demand over the year and multiplied by 365 days to obtain an annual demand. licenced volume is the total annual demand;
Industrial, irrigation, storage, land improvement and conservation licenced acft demand is the annual licenced demand volume converted to dam$^3$.

Licensed surface water sources located in the Saanich-Victoria plan area include about 128 springs, 68 brooks and creeks, 16 lakes and a number of ponds, swamps and ditches.

## 5.1 Low Flow Licensed Water Demand

The low flow period licensed water demand may be critical between competing water uses and instream flow requirements to maintain the fish resource. The estimated low flow licensed demand for each identified drainage area and for other drainages in the Saanich-Victoria Water Allocation Plan area is summarized in the following table.

**Low Flow Licensed Demand by Drainage**

| Drainage | Low Flow Water Demand* | |
|---|---|---|
| | litres/sec | $Dam^3$ |
| Colwood Creek | -0.9 | -7.1 |
| Millstream Creek | 1.0 | 7.6 |
| Craigflower Creek | 0.2 | 2.6 |
| Tod Creek | 16.3 | 130.3 |
| Colquitz River | 108.7 | 846.0 |
| Burnham Brook | 2.9 | 22.9 |
| Noble Creek | 33.2 | 258.4 |
| Sandhill Creek | 39.8 | 309.0 |
| Hagen Creek | 72.4 | 561.3 |
| Airport Creek | 9.6 | 73.8 |
| Chalet Creek | 0.5 | 4.3 |
| Other | 35.3 | 275.2 |
| Total | 319.0 | 2,484.3 |

* Based on an estimated 90 day period demand assuming that; irrigation and industrial demands are totally withdrawn over the 90 day period; domestic and municipal waterworks demand is the authorizes licenced maximum daily for 90 days; authorized storage balances demand and therefore is a negative demand over 90 days; land improvement and conservation are non-consumptive and therefore have no demand.

The above low flow demands represent the water demands not supported by

storage. The total low flow licensed consumptive water demand is 3,409.2 $dam^3$; of which 924.9 $dam^3$ can be supplied from and supported by storage. Therefore storage only supports 27% of the total low flow licenced demand.

### 5.2 Municipal Waterworks Water Demand

Water supply for all municipal waterworks within the plan area is obtained from outside the plan area. Bulk municipal water supply to the plan area is from the Greater Victoria Waterworks District's (GVWD) supplies from the Sooke River and Goldstream River watersheds. However there are three municipal waterworks water licenses still within the plan area and municipal waterworks purposes water licence demands are the third largest annual licenced water demand in the plan area. The three water licenses are:

FL21629 on Elk Lake for 1,537,000 gpd (maximum day) and 152 Mgpyr
CL23144 on Brentwood Spring for 300,000 gpd (maximum day)
CL27027 on Quarry Lake for 200,000 gpd (maximum day)

The Capital Regional District (CRD) holds all three water licences and is possibly retaining them for an emergency backup supply should the GVWD pipeline fail due to a natural catastrophe. However emergency water supply is provided for in Section 7 (short term nonrecurrent use) and Section 42 (extinguishing a fire) of the Water Act. These three water licences are no longer required for municipal waterworks water supply.

The CRD was also encouraged to consider amending and developing these water licenses as a separate irrigation supply for the Saanich Peninsula; especially FL21629 on Elk Lake. Although reports were completed that assessed the feasibility of the proposed irrigation supply nothing ever was developed. Both FL21629 on Elk Lake and CL23144 on Brentwood Spring should be cancelled for none use.

Butchard Gardens has been encouraged to use water from Quarry Lake in exchange for relinquishing their water licences on Prospect Lake and Tod Creek. Instream fish flows in Tod Creek could be enhanced if Butchard Gardens removed water from Quarry Lake rather than Tod Creek. The Amendment of CL27027 is awaiting transfer of the water licence to Butchard Gardens Limited by CRD and agreement to the transfer by the Municipal District of Central Saanich. Failing the transfer the water licence CL27027 should also be cancelled for none use.

### 5.3 Domestic Water Demand

Despite the large number of domestic water licences, the licenced domestic water demand represents only 1.0% of the total average annual demand. Except for local competition for water on small streams and springs, domestic demand is not significant.

### 5.4 Industrial Water Demand

The water demand under this category would be better described as commercial (water bottling, cold storage cooling and gravel washing) or agricultural (stock watering, tree spraying for frost protection, fish culture ponds and golf course watering) demands. However under the Water Act Regulations these uses are categorized as sub-categories of industrial water demand. Most industrial demands have some natural or dugout storage development to provide support. The older cold storage purpose and gravel washing purpose water licenses should be investigated to determine if there is still water use.

### 5.5 Irrigation Water Demand

Irrigation water demand is the second largest annual water demand and the largest consumptive water demand within the plan area. Irrigation water demand will have the most significant impact on low flows. Irrigation water demand occurs during the low flow period and when the instream water requirement to support fish is the highest.

Individual licenses for irrigation water demand vary from 0.16 $dam^3$ (0.13 acft) to 111 $dam^3$ (90 acft). Most individual water licence demand for irrigation are small with 98% less than 60 $dam^3$ (50 acft), 93% less than 25 $dam^3$ (20 acft) and 76% less than 12 $dam^3$ (10 acft). It is the large number of these irrigation water demands that cumulatively impact on instream water requirements to support fish. Many of the irrigation water demands are not supported by storage.

### 5.6 Storage Water Demand

Storage only supports 27% of the total low flow licenced demand. The largest licenced storage developments mainly support industrial demands such as tree spraying for frost protection, golf course watering and gravel washing.

There is considerable water available in excess of instream flow requirements (greater than 60% MAD) for storage development during the period from November through April in most drainages.

## 5.7 Land Improvement Water Demand

The largest annual water demand in this plan area is for land improvement purpose. Land improvement water licences are, in general, non-consumptive uses of the water resource. No significant water quantity is removed from the stream. Water is usually maintained in a dammed lake or reservoir for recreation (ie boating, fishing, swimming, golf course water traps) and aesthetics. The dammed lake or reservoir is usually filled during the high flow period and the water levels maintained or gradually lowered during the low flow period. Thus land improvement demands have little impact on low flows; except in the three cases as noted below.

The three largest land improvement water licences represent 96% of the total land improvement licensed annual demand. These three largest water licences are:

| | | |
|---|---|---|
| CL65796 on Elk/Beaver Lakes for | 2,800 acft = | 3,453.8 $dam^3$ |
| FL21628 on Thetis Lake for | 1,285 acft = | 1,585.0 $dam^3$ |
| CL60785 on Durrance Lake for | 209 acft = | 257.8 $dam^3$ |
| | 4,294 acft = | 5,296.6 $dam^3$ |

These three water licenses authorize regional and municipal governments to maintain and operate dams or flow control weirs and maintain water levels on three lakes. These three lakes are the centre of regional parks and are used for recreation pursuits such as boating, fishing and swimming. However all three lakes are also regulated to maintain some outflow for instream fish values in Colquitz River, Craigflower Creek and Tod Creek. Therefore all three streams have some level of improved low flows. For example the Capital Regional District and the Municipality of Saanich endeavour to maintain the outflow from Elk/Beaver Lakes above a minimum flow of 0.06 $m^3$/sec (2.0 cfs). The flow records indicates that this low flow maintenance endeavour may be improving the estimated low flows in July by over 200%, in August by over 150% and in September by over 170%. The regulated lake outflow of the land improvement water licenses on Thetis Lake and Durrance Lake would probably not increase the low flows as much in Craigflower Creek and Tod Creek respectively.

## 5.8 Conservation Water Demand

Conservation water demand is the smallest licenced water demand in this plan area. There are only 6 water licences for conservation purpose; 4 authorizing small impoundments and 2 authorizing the construction of works in a stream to enhance fish habitat. The conservation demands have little impact on low flows or licensed demands.

## 5.9 Projected Demand

There are 13 water licence application demands pending as of March 31, 1995. The following table summarizes the pending water licence applications. More details on these water licence applications may be found in Appendix F.

**Average Annual Water Licence Application Demand**

| Purpose | No. of Lic. | Licensed Quantity | Average Annual Licensed Demand |
|---|---|---|---|
| | | | $dam^{3*}$ |
| Domestic | 4 | 2,500 gpd | 2 |
| Industrial (Golf Course Watering) | 1 | 40 acft | 49 |
| Irrigation | 2 | 48.5 acft | 60 |
| Storage | 2 | 48.5 acft | 60 |
| Land Improvement (Ponds) | 4 | 4.0 acft | 5 |
| Total | 13 | | 176 |

* Based on the following assumptions:
Domestic demand is the authorizes maximum daily licenced divided by 2 to estimate the average daily demand and multiplied by 365 days for an annual demand;
Industrial irrigation, storage and land improvement licenced volume is the total annual demand converted to $dam^3$.

The industrial (Golf Course Watering) water licence application for water from Prospect Lake may include some provision for a quantity of supporting storage which is yet to be determined. The two water licence applications for irrigation purpose are proposed to be supported by storage. Three of the four water licence applications for land improvement purpose are for the construction and maintenance of small aesthetic ponds of an unspecified size on small brooks.

The fourth water licence application for land improvement purpose was submitted by the applicant to protect 1/20 of the riparian area of a small lake (Mystic Lake) adjoining her property. As there is no works and valid use of water this latter water licence application will probably have to be refused. Also it is not in the public interest to have one individual with a none beneficial use interest controlling Mystic Lake. Therefore it is prefered that the Municipality of Saanich apply for a water licence to maintain the water level for all adjoining property owners. A nominal size of 1.0 acft for each water licence application for land improvement was assumed for the above table.

Future water demands within the plan area will primarily relate to small domestic demand outside of municipal water supply areas, irrigation demand on agricultural land on the Saanich Peninsula, land improvement demand for small aesthetic ponds on semi-rural lots and industrial demands for water golf courses and other small commercial enterprises.

## 6.0 CONCLUSIONS AND RECOMMENDATIONS

The following table provides a summary of the mean annual discharge (MAD) and licence water demand and water available for various periods.

**Water Available**

| Drainage | MAD (l/sec) | Licence Water Demand | | | Water Available | |
|---|---|---|---|---|---|---|
| | | Low Flow[1] ($dam^3$) | Annual[2] ($dam^3$) | Storage[3] ($dam^3$) | May-Oct[4] ($dam^3$) | Nov-Apr[5] ($dam^3$) |
| Colwood Creek | 120 | -7.1 | 103.9 | 111.0 | 0 | 2,470 |
| Millstream Creek | 377 | 7.6 | 14.9 | 56.7 | 0 | 7,920 |
| Craigflower Creek | 307 | 2.6 | 6.5 | 1,638.8 | 0 | 7,070 |
| Tod Creek | 296 | 130.6 | 410.0 | 494.7 | 0 | 6,640 |
| Colquitz River | 593 | 846.0 | 1,611.1 | 3,572.0 | 0 | 12,250 |
| Burnham Brook | 33 | 22.9 | 56.2 | 75.2 | 0 | 670 |
| Noble Creek | 114 | 258.4 | 271.1 | 8.9 | 0 | 2,350 |
| Sandhill Creek | 173 | 309.0 | 483.3 | 148.0 | 0 | 3,570 |
| Hagen Creek | 194 | 561.3 | 936.4 | 234.6 | 0 | 4,000 |
| Airport Creek | 75 | 73.8 | 121.6 | 46.9 | 0 | 1,560 |
| Chalet Creek | 39 | 4.3 | 8.2 | 3.7 | 0 | 800 |
| Other | 13[6] | 275.2 | 349.8 | 63.5 | 0 | 269 |

[1] Net 90 day licenced water demand, subtracting supporting storage, during April through September period.
[2] Annual demand excluding supporting storage, land improvement and conservation volumes.
[3] Licensed water supporting storage, land improvement and conservation demand volumes during the November through April period.
[4] A natural mean monthly flow is below 10% MAD during this period in all significant drainages. Therefore water is only available for the period when the mean monthly flow is above 60% MAD.
[5] Estimated natural average volume of water above 60% MAD.
[6] Mean annual discharge (MAD) per square kilometre.

To estimate the net water available in excess of 60% MAD for the November through April period, the licensed water supporting storage, land improvement and conservation volume and part of the annual demand should be subtracted from the water available during the November through April period. The net water available in excess of

60% MAD is considerably larger than the existing and projected licensed demand. Therefore ample water is available during the November through April period to supply all water demands. However off-stream storage is required to support water demands during the low flow months of May through October if instream fish flow requirements are to be maintained.

There is fish and fish habitat in all identified drainages within the plan area. Existing low flows are naturally limiting to fish migration, rearing and habitat maintenance. Low flow licensed water demands would further reduce the low flow and adversely affect the fisheries resource unless supporting storage is developed. Existing storage in most of the identified drainages is not adequate to support existing and licensed water demands. All existing and proposed significant licensed demands should be supported with off stream storage if water withdrawals are not to adversely affect flows required to maintain the fisheries resource.

Significant water withdrawals from lakes can reduce the low flows required to maintain the fisheries resource or extend the period of time of zero flow and thus hinder fish migration. When water withdrawals from a lake affect the flow required to maintain the fisheries resource, storage will be required to maintain the flow in the outflow stream.

On streams that support fish migration, water diversion works and storage dams need to be constructed so as to ensure fish passage for both juvenile and adult fish. To prevent fish and debris entering intakes, adequately designed and constructed fish screens are required on both lakes and streams that support fish.

### 6.1 Waterworks

The population of the plan area has increased from 243,428 people to 313,714 people from 1978 to 1993; an increase of 31%. Most impacted by this growth in population were the municipalities of North Saanich, Sydney and Central Saanich; their individual percentage increases were 108.6%, 55.5% and 72.6%, respectively. Population growth for the plan area is forecasted to continue a similar trend over the next 25 years. However, as municipal waterworks demands within the plan area will continue to be supplied by the Greater Victoria Water District from the Sooke River and Goldstream River watersheds outside of the plan area, the population growth will have little impact on water demand.

All further subdivision development within the plan area will be required to connect to the Greater Victoria Water District supply or obtain deep ground water supplies that do not affect surface water flows. No significant surface water supply is available in the plan area for municipal waterworks use.

## 6.2 Domestic

A domestic water licence shall be 2273 litres per day (500 gallons per day) for each rural dwelling as indicated on the plan attached to the water license application. This amount will allow for the maintaining of 0.10 hectares (0.25 acres) of garden associated with the dwelling. Domestic water licences shall not be issued solely to maintain green lawns and gardens where groundwater and other sources of water supply provide the primary domestic household needs.

Domestic water licences shall not be issued to provide evidence to subdivision approval authorities of an "adequate potable water supply" for subdivision development. Subdivisions of large areas of land into urban or suburban size lots shall be encouraged to develop a community water system and connect to the Greater Victoria Water District municipal waterworks system.

To ensure an adequate domestic water supply for household uses, from a surface water source, applicants shall be required to develop storage or use the natural storage provided in lakes, ponds or marshes. Individual domestic demands are not significant and will not significantly affect the water volume in or the flow from most lakes, ponds and large marshes. For domestic water demands from brooks, creeks and rivers, the storage required is the average daily demand of 1135 litres per day (250 gpd) for the five month period of June through October (184 days) when the natural flow is below 20% MAD. This requires a reservoir or dugout which is approximately 210 $m^3$ (7,400 $ft^3$ or 0.17 acre feet). A dugout that is 10 metres long by 7 metres wide with an average depth of 3.3 metres (30 feet wide by 25 feet long by 11 feet deep) will provide an adequate storage support for domestic demand and allowing 0.3 metre (1 foot) for evaporation losses.

For domestic water demands within the plan area, but in minor drainages where there are no instream fish flow requirements, the storage required is the average daily demand of 1135 litres per day (250 gpd) for a three month period of no flow from July through September (92 days); which is 105 $m^3$ (3,700 $ft^3$ or 0.08 acre feet). This requires a reservoir or dugout approximately 7 metres long by 5 metres wide with an average depth of 3.3 metres (25 feet long by 15 feet wide by 11 feet deep); allowing 0.3 metre (1 foot) for evaporation loss. The above storage requirement (domestic demands in minor drainages with no instream fish flow requirement) may be relaxed if the applicant provides adequate flow measurements for a period of one complete year or more and these flow measurements indicate that less storage is required to support the water demand.

A water licence for domestic use shall not be issued to a residence within a community water supply area unless written leave to do so is obtained from the community water supply agency.

Domestic purpose water licences shall be appurtenant to the dwelling(s) located approximately on the plan attached to the water license.

### 6.3 Industrial

The industrial water licenses and water applications in the plan area are demands associated water bottling, cold storage cooling and gravel washing or stock watering, tree spraying for frost protection, fish culture ponds and golf course watering demands.

The water quantity that will be authorized for water bottling will depend on the quantity of water that will be stored to support the demand. Similar to domestic demands, applicants shall be required to develop storage or use the natural storage provided in lakes, ponds or marshes. Individual water bottling demands are not significant and will not significantly affect the water volume in or the flow from most lakes, ponds and large marshes. For water bottling demands from brooks, creeks and rivers, the storage required is the average daily demand of the bottling plant for the five month period of June through October (184 days) when the natural flow is below 20% MAD. A water bottling plant that bottles 250 gallons per day would require a reservoir or dugout which is approximately 210 $m^3$ (7,400 $ft^3$ or 0.17 acre feet). A dugout that is 10 metres long by 7 metres wide with an average depth of 3.3 metres (30 feet wide by 25 feet long by 11 feet deep) will provide an adequate storage support and allowing 0.3 metre (1 foot) for evaporation losses.

For water bottling demands in minor drainages where there are no instream fish flow requirements, the storage required is the average daily demand of the bottling plant for a three month period of no flow from July through September (92 days). The above storage requirement (domestic demands in minor drainages with no instream fish flow requirement) may be relaxed if the applicant provides adequate flow measurements for a period of one complete year or more and these flow measurements indicate that less storage is required to support the water demand.

Water is no longer used for cold storage cooling and the existing water licence for this purpose should be reviewed to see if cancellation for none use is appropriate.

The maximum water quantity that will be authorized for sand and gravel washing is 880 litres per metric ton (190 gallons/ton) for initial filling of the washing ponds and 130 litres per metric ton per 8 hour day (30 gallons/ton/8-hr day) to make-up the water lost from the washing ponds during washing operations. A recycling water use system and adequate storage as noted above in water bottling will be required to support the demand during the low flow period.

Cattle or livestock requiring 450 L/day or more will be considered an Industrial

(Agricultural) demand. Cattle or livestock requiring 450 L/day or less will be considered a Domestic (livestock) demand. Tree spraying for frost protection, crop suppression (potatoes) and flood harvesting (cranberries) are also industrial demands associated with agriculture. Storage is required to support all these demands. Estimated agricultural demands are:

**Agricultural Water Demands**

| **Types of Livestock** | **Gallons/day** | **Litres/day** |
|---|---|---|
| Livestock Drinking: (per animal) | | |
| Cattle | 10 | 46 |
| Dairy cattle (and servicing) | 29 | 132 |
| Goat | 1 | 5 |
| Hog | 3 | 14 |
| Horse | 10 | 46 |
| Mule | 10 | 46 |
| Sheep | 1 | 5 |
| Steer | 10 | 46 |
| Poultry: | | |
| Chicken (per 100) | 6 | 27 |
| Turkeys (per 100) | 12 | 55 |
| **Type of Agricultural Activity** | **acre-feet/acre** | **$dam^3$ per hectare** |
| Flood harvesting (cranberries) | 1 | 2 |
| Crop suppression (potatoes) | 0.1 (from Jan. to Mar.) | 0.2 (from Jan. to Mar.) |
| Frost protection and tree cooling | 1 | 2 |

Commercial fish hatcheries and fish rearing facilities shall require an industrial water licence. Use of water by government and non-profit organizations in fish hatcheries and fish rearing facilities shall be licensed as conservation purpose. Information on fish species and size, water temperature requirements and operating methods will be required in support of an application for a water licence. Fish Farm and Waste Management Permits will also be required.

Golf course watering and greenhouses are essentially an irrigation water demand except that the watering is not restricted to the irrigation period of April to September. The

quantity of water required should be determined as follows in the irrigation section below. Except for the period of water withdrawal; which shall be whole year; the same requirements and conditions as irrigation demands shall apply. Storage is required to support these demands.

## 6.4 Irrigation

The soil type, crop rooting depth and climatic characteristics determine the water requirements for irrigation. The soils on Saanich Peninsula, for the purpose of potential irrigation demands, can be classified into four soil groups. The soil groups located in the Saanich-Victoria Water Allocation Plan area are illustrated in Figure 12 and a summary of the irrigation demand for these four soil groups is provided in the following table:

**Annual Irrigation Water Requirements**

| Crops | Beans, Beets, Blueberries, Broccoli, Cabbages, Carrots, Cauliflowers, Celery, Clover (ladino), Cranberries, Cucumbers, Lettuce, Onions, Pasture species, Peas, Potatoes, Radishes, Spinach, Strawberries, Tomatoes, Turnips | Brussels Sprouts, Cereals, Clover (red), Corn (sweet), Eggplant, Kiwifruit, Peppers, Squash | Alfalfa, Asparagus, Blackberries, Corn (field), Grapes, Loganberries, Raspberries, Sugar Beets, Tree Fruits |
|---|---|---|---|
| Effective Rooting Depth | Shallow to Medium Shallow<br>0.5 m to 0.6 m<br>(1.5 to 2.0 ft) | Medium Deep<br>0.9 m<br>(3.0 ft) | Deep<br>1.2 m<br>(4.0 ft) |
| Soil Texture | mm (in) | mm (in) | mm (in) |
| Organic - Humic (black) | 380<br>(15) | 300<br>(12) | 150<br>(6) |
| Clay Loam & Silty Clay Loam (dark green) | 460<br>(18) | 300<br>(12) | 230<br>(9) |
| Gravelly Sandy Loam (light green) | 610<br>(24) | 380<br>(15) | 380<br>(15) |
| Gravelly Loamy Sand and Very Gravelly Loamy Sand (blue) | 610<br>(24) | 460<br>(18) | 380<br>(15) |

Figure 12: Soil Types for Annual Irrigation Requirement

Many of the soil association descriptions on the map were composites of two or three soil associations. Composite map symbols were used on the soils map where two or three soil associations are intermixed or occupy such small areas that they cannot be separated at the scale of the mapping. Only the predominant soil association was considered and colour mapped for irrigation requirements. Where more specific soil assessments are available for a given area, that soil assessment may be used to assess irrigation demands.

Areas identified as predominantly rock outcrop, coastal beach or tidal flats were assumed to have no potential irrigation demand. It should be noted that these annual irrigation water requirements are for sprinkler irrigation systems only.

If an irrigation gun or flood irrigation is used then greater irrigation quantities may be required; these irrigation practices should be discouraged. All irrigation gun and flood irrigation practices should be required to install suitable meters and limit their water withdrawals to sprinkler annual irrigation requirements for the equivalent area of land. As the equivalent sprinkler annual irrigation water requirement may not be adequate to sustain crops using these less efficient methods of irrigation, the farmer may then have to reduce crops, reduce acreage irrigated or convert to a more efficient sprinkler irrigation system.

An efficient alternative irrigation method is trickle irrigation. Trickle irrigation can reduce water requirements by 35% and should be encouraged. Reduced water licence fees may be the primary incentive to encourage this more efficient use of water.

Irrigation gun and flood irrigation practices should be required to install suitable meters and limit their water withdrawals to sprinkler annual irrigation water requirements for the equivalent area of land.

The maximum rate of withdrawal from any river, creek, brook, swamp, marsh or spring shall be 37.0 litres per minute per hectare (3.3 gallons per minute per acre) of land to be irrigated. This maximum water withdrawal rate shall be included in all further water licences for irrigation purpose.

All further water licences for irrigation purpose must be supported by storage. If storage is developed on existing lakes, ponds or marshes, fish passage around the storage structure must be provided and mean monthly low flows must be maintained for fish instream requirements. The storage volume required is directly proportional to the irrigation demand, plus an additional 0.3 m of water allowance over the surface area of the body of water for evaporation and other losses from the storage reservoir.

## 6.5 Storage

Storage purpose is the impoundment of water, either on-stream or off-stream in a dugout or behind a dam to support another water use. In the unlikely event that a large storage development to support an major water use (ie. BC Hydro power, pulp & paper, large waterworks) is proposed a more specific supply versus demand and environmental impact assessment will be required.

The storage quantity required to support the smaller water demands anticipated to support domestic, industrial, commercial and irrigation uses shall be the volume of the water demand plus an additional allowance of 0.3 metres (1.0 foot) depth over the surface area of the storage reservoir for evaporation and other losses.

The applicant will be required to complete an adequate report for "Dam and Reservoir Information Required in Support of a Water Licence Application for Storage Purpose (Schedule 2)" with the water licence application. If the required report is not provided the application will be refused.

Total storage (dead and live) will be licensed. Dead storage should be licensed as it will in most cases have some intrinsic value such as providing conservation of water for wildlife or aesthetic value.

Diversion of water into off-stream storage will be during the period from November through April. All in-stream storage water licensees will be required to release at the outflow the estimated mean monthly inflow to the reservoir during the period from May through October.

The applicant must obtain written agreement, right-of-way or easement for works or flooding of other lands.

Fish passage is required for both juvenile and adult fish, at all dams in fish bearing streams. Design of storage dams must consider fish ladders and provide adequate flow release to maintain fish passage where required. Loss of spawning areas and modification of fish habitat due to storage development may require mitigation work in the stream affected.

Design plans must be submitted and accepted in writing before construction commences on any proposed dam over 3 m (10 ft) in height or on storage of 12 $dam^3$ (10.0 acft) or more in volume.

## 6.6 Land Improvement

Land improvement purpose is the impoundment of water on a stream or the diversion of water from a stream to facilitate the development of a park, to construct and maintain an aesthetic pond, to protect property from erosion or to drain and reclaim land. No significant water quantity is removed from the stream. Land improvement water demands are non-consumptive uses of the water resource.

Water used to facilitate the development of a park is usually maintained in a dammed lake or reservoir for recreation (ie boating, fishing, swimming, golf course water traps) and aesthetics. The dammed lake or reservoir is usually filled during the high flow period and the water levels maintained or gradually lowered during the low flow period. Golf courses also acquire water licences to construct and maintain dugouts or control the volume of water in small ponds for water traps and aesthetics. Property owners likewise may acquire a water licence to construct and maintain dugouts or control the volume of small ponds for aesthetics and to increase property values. These water demands are essentially storage developments that do not support an extractive use. Therefore, all the requirements noted for storage development shall be required for land improvement development where applicable. No supporting storage is required. The water quantity required to facilitate the development of a park or create an aesthetic pond shall be the volume of the impoundment.

Constructing ditches to drain swamps or marshes, confining or straightening the meandering of stream channels and relocating a stream channel adjacent to a property line is sometimes proposed to accommodate subdivision or building development. Streams should not be relocated to accommodate development. Post-development flow conditions should be maintained as near as possible to pre-development flow conditions. The development of land improvement detention dugouts or the control of water in natural ponds, swamps and marshes to reduce flood flow and increase low flow releases will be encouraged. Proposed construction of works on streams that drain swamps or marshes or increase high flow conditions and reduce low flow conditions will not be authorized.

## 6.7 Conservation

Conservation purpose is the use and storage of water or the construction of works in and about a stream for the enhancement of fish or wildlife for non-profit purposes.

Salmon enhancement proposals that would increase fish stocks in the stream channels will require the development of supporting storage to maintain required low flow. All the requirements noted for storage development shall be required for conservation development where applicable.

## 6.8 Allocation Plan Revision

The Saanich-Victoria Water Allocation Plan should be reviewed and updated on or before December 2000 (5 years).

# APPENDIX A

Canadian Climatic Normals

1951-1980

Temperature and Precipitation

# BRITISH COLUMBIA/COLOMBIE-BRITANNIQUE

**LANGFORD LAKE**
48° 27'N 123° 31'W 76 m

| | JAN<br>JAN | FEB<br>FÉV | MAR<br>MAR | APR<br>AVR | MAY<br>MAI | JUN<br>JUIN | JUL<br>JUIL | AUG<br>AOÛT | SEP<br>SEPT | OCT<br>OCT | NOV<br>NOV | DEC<br>DÉC | YEAR<br>ANNÉE | CODE<br>CODE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily Maximum Temperature | | | | | | | | | | | | | | | Température Maximale Quotidienne |
| Daily Minimum Temperature | | | | | | | | | | | | | | | Température Minimale Quotidienne |
| **Daily Temperature** | | | | | | | | | | | | | | | **Température Quotidienne** |
| Standard Deviation, Daily Temperature | | | | | | | | | | | | | | | Écart Type de la Température Quotidienne |
| Extreme Maximum Temperature | | | | | | | | | | | | | | | Température Maximale Extrême |
| Years of Record | | | | | | | | | | | | | | | Années de Relèves |
| Extreme Minimum Temperature | | | | | | | | | | | | | | | Température Minimale Extrême |
| Years of Record | | | | | | | | | | | | | | | Années de Relèves |
| Rainfall | 170.6 | 114.4 | 81.2 | 50.0 | 23.7 | 19.4 | 15.7 | 20.5 | 42.4 | 107.7 | 157.9 | 191.5 | 995.0 | 8 | Chutes de Pluie |
| Snowfall | 20.4 | 5.3 | 6.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.3 | 10.9 | 44.6 | 8 | Chutes de Neige |
| **Total Precipitation** | **188.9** | **121.2** | **86.7** | **49.3** | **23.7** | **19.4** | **15.7** | **20.5** | **42.4** | **107.7** | **160.0** | **202.6** | **1038.1** | **8** | **Précipitations Totales** |
| Standard Deviation, Total Precipitation | 109.2 | 75.9 | 48.7 | 34.9 | 14.9 | 16.4 | 14.9 | 15.8 | 32.1 | 49.8 | 83.3 | 79.3 | 143.1 | 5 | Écart Type des Précipitations Totales |
| Greatest Rainfall in 24 hours | 67.6 | 91.7 | 46.2 | 44.7 | 28.2 | 22.9 | 15.5 | 27.4 | 57.4 | 66.5 | 134.1 | 130.0 | 134.1 | | Chute de Pluie Record en 24 heures |
| Years of Record | 14 | 13 | 13 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | | | Années de Relèves |
| Greatest Snowfall in 24 hours | 31.8 | 18.8 | 19.3 | 0.3 | 0.0 | T | 0.0 | 0.0 | 0.0 | 0.0 | 7.6 | 33.0 | 33.0 | | Chute de Neige Record en 24 heures |
| Years of Record | 14 | 13 | 13 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | | | Années de Relèves |
| Greatest Precipitation in 24 hours | 67.6 | 91.7 | 46.2 | 44.7 | 28.2 | 22.9 | 15.5 | 27.4 | 57.4 | 66.5 | 134.1 | 130.0 | 134.1 | | Précipitation Record en 24 heures |
| Years of Record | 14 | 13 | 13 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | | | Années de Relèves |
| Days with Rain | 18 | 16 | 17 | 12 | 9 | 7 | 5 | 6 | 9 | 15 | 19 | 20 | 153 | 8 | Jours de Pluie |
| Days with Snow | 4 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 10 | 8 | Jours de Neige |
| Days with Precipitation | 20 | 17 | 17 | 13 | 9 | 8 | 5 | 6 | 8 | 15 | 19 | 21 | 158 | 8 | Jours de Précipitation |

## BRITISH COLUMBIA/COLOMBIE-BRITANNIQUE

**SAANICHTON CDA**
48° 37'N 123° 25'W 61 m

| | JAN JAN | FEB FÉV | MAR MAR | APR AVR | MAY MAI | JUN JUIN | JUL JUIL | AUG AOÛT | SEP SEPT | OCT OCT | NOV NOV | DEC DÉC | YEAR ANNÉE | CODE CODE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily Maximum Temperature | 5.6 | 7.8 | 9.2 | 12.4 | 16.2 | 18.9 | 21.6 | 21.2 | 18.4 | 13.6 | 9.0 | 6.7 | 13.4 | 1 | Température Maximale Quotidienne |
| Daily Minimum Temperature | 0.5 | 1.9 | 2.2 | 4.4 | 7.1 | 9.6 | 11.3 | 11.4 | 9.7 | 6.5 | 3.4 | 1.8 | 5.8 | 1 | Température Minimale Quotidienne |
| **Daily Temperature** | **3.1** | **4.9** | **5.7** | **8.4** | **11.7** | **14.3** | **16.5** | **16.3** | **14.1** | **10.1** | **6.2** | **4.3** | **9.6** | 1 | **Température Quotidienne** |
| Standard Deviation, Daily Temperature | 1.6 | 1.4 | 1.1 | 0.9 | 1.1 | 1.3 | 1.1 | 1.0 | 1.1 | 0.7 | 1.2 | 1.4 | 0.5 | 1 | Ecart Type de la Température Quotidienne |
| Extreme Maximum Temperature | 13.9 | 16.1 | 19.4 | 23.9 | 29.4 | 33.9 | 34.4 | 32.8 | 28.9 | 24.4 | 17.8 | 14.5 | 34.4 | | Température Maximale Extrême |
| Years of Record | 66 | 66 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | | | Années de Relèves |
| Extreme Minimum Temperature | -13.3 | -12.2 | -6.9 | -3.3 | -1.1 | 2.2 | 3.3 | 4.4 | 1.7 | -3.9 | -12.2 | -13.9 | -13.9 | | Température Minimale Extrême |
| Years of Record | 66 | 66 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | | | Années de Relèves |
| Rainfall | 141.3 | 93.1 | 64.5 | 36.6 | 27.1 | 28.4 | 18.0 | 28.5 | 40.2 | 81.0 | 128.4 | 146.7 | 837.8 | 1 | Chutes de Pluie |
| Snowfall | 14.4 | 6.1 | 3.8 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.6 | 9.9 | 35.9 | 1 | Chutes de Neige |
| **Total Precipitation** | **158.2** | **99.3** | **67.5** | **36.7** | **27.1** | **28.4** | **18.0** | **28.5** | **40.2** | **81.0** | **130.0** | **156.6** | **873.5** | 1 | **Précipitations Totales** |
| Standard Deviation, Total Precipitation | 71.5 | 40.1 | 32.1 | 20.7 | 11.0 | 21.2 | 14.0 | 22.9 | 24.3 | 54.4 | 64.5 | 52.8 | 132.3 | 1 | Ecart Type des Précipitations Totales |
| Greatest Rainfall in 24 hours | 73.2 | 49.8 | 39.1 | 36.6 | 45.7 | 40.6 | 31.2 | 55.6 | 46.2 | 56.9 | 82.3 | 68.3 | 82.3 | | Chute de Pluie Record en 24 heures |
| Years of Record | 66 | 66 | 67 | 67 | 67 | 66 | 67 | 67 | 67 | 67 | 67 | 67 | | | Années de Relèves |
| Greatest Snowfall in 24 hours | 35.1 | 52.1 | 20.3 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 22.9 | 40.6 | 52.1 | | Chute de Neige Record en 24 heures |
| Years of Record | 66 | 66 | 66 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | | | Années de Relèves |
| Greatest Precipitation in 24 hours | 73.2 | 52.1 | 39.1 | 36.6 | 45.7 | 40.6 | 31.2 | 55.6 | 46.2 | 56.9 | 82.3 | 68.3 | 82.3 | | Précipitation Record en 24 heures |
| Years of Record | 66 | 66 | 67 | 67 | 67 | 66 | 67 | 67 | 67 | 67 | 67 | 67 | | | Années de Relèves |
| Days with Rain | 17 | 15 | 14 | 11 | 9 | 7 | 5 | 7 | 9 | 14 | 17 | 19 | 144 | 2 | Jours de Pluie |
| Days with Snow | 3 | 1 | 1 | * | 0 | 0 | 0 | 0 | 0 | 0 | * | 2 | 7 | 1 | Jours de Neige |
| Days with Precipitation | 19 | 15 | 14 | 11 | 9 | 7 | 5 | 7 | 9 | 14 | 17 | 20 | 147 | 2 | Jours de Précipitation |

**SAANICH DENSMORE**
48° 30'N 123° 25'W 38 m

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily Maximum Temperature | 5.7 | 8.3 | 10.1 | 13.7 | 17.8 | 20.9 | 23.8 | 23.5 | 20.2 | 14.5 | 9.5 | 7.0 | 14.6 | 8 | Température Maximale Quotidienne |
| Daily Minimum Temperature | -0.1 | 1.1 | 1.1 | 3.2 | 5.8 | 8.4 | 10.4 | 9.9 | 8.2 | 5.4 | 2.5 | 1.1 | 4.8 | 8 | Température Minimale Quotidienne |
| **Daily Temperature** | **2.8** | **4.9** | **5.7** | **8.5** | **11.9** | **14.8** | **17.1** | **16.9** | **14.2** | **10.0** | **6.1** | **4.0** | **9.7** | **8** | **Température Quotidienne** |
| Standard Deviation, Daily Temperature | 1.8 | 1.1 | 1.0 | 0.7 | 0.8 | 1.4 | 0.8 | 1.4 | 1.2 | 0.7 | 1.0 | 1.8 | 0.3 | 6 | Écart Type de la Température Quotidienne |
| Extreme Maximum Temperature | 13.9 | 17.2 | 17.2 | 23.3 | 30.0 | 31.1 | 32.2 | 32.2 | 31.7 | 23.3 | 17.2 | 12.8 | 32.2 | | Température Maximale Extrême |
| Years of Record | 9 | 9 | 8 | 8 | 8 | 8 | 6 | 6 | 6 | 7 | 8 | 8 | | | Années de Relèves |
| Extreme Minimum Temperature | -13.9 | -6.7 | -5.0 | -3.9 | -1.1 | 2.2 | 4.4 | 3.9 | -2.2 | -3.9 | -3.9 | -13.9 | -13.9 | | Température Minimale Extrême |
| Years of Record | 9 | 9 | 9 | 8 | 8 | 7 | 5 | 6 | 8 | 8 | 7 | 8 | | | Années de Relèves |
| Rainfall | 154.1 | 102.4 | 70.5 | 42.3 | 25.7 | 27.8 | 18.0 | 24.2 | 38.6 | 86.4 | 134.2 | 170.2 | 894.4 | 8 | Chutes de Pluie |
| Snowfall | 10.9 | 1.1 | 1.6 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 8.7 | 24.0 | 8 | Chutes de Neige |
| **Total Precipitation** | **166.7** | **106.6** | **74.5** | **42.7** | **25.7** | **27.8** | **18.0** | **24.2** | **38.6** | **86.4** | **136.0** | **178.0** | **928.4** | **8** | **Précipitations Totales** |
| Standard Deviation, Total Precipitation | 66.0 | 46.6 | 44.4 | 31.6 | 10.4 | 13.1 | 12.6 | 20.6 | 15.2 | 69.8 | 46.8 | 52.3 | 162.8 | 5 | Écart Type des Précipitations Totales |
| Greatest Rainfall in 24 hours | 55.4 | 59.7 | 49.0 | 31.5 | 20.3 | 16.5 | 8.9 | 22.9 | 43.2 | 51.6 | 46.7 | 79.2 | 79.2 | | Chute de Pluie Record en 24 heures |
| Years of Record | 11 | 11 | 11 | 10 | 9 | 10 | 7 | 8 | 9 | 9 | 11 | 11 | | | Années de Relèves |
| Greatest Snowfall in 24 hours | 19.8 | 1.0 | 1.8 | T | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.1 | 39.4 | 39.4 | | Chute de Neige Record en 24 heures |
| Years of Record | 11 | 11 | 10 | 10 | 10 | 10 | 9 | 10 | 10 | 10 | 11 | 10 | | | Années de Relèves |
| Greatest Precipitation in 24 hours | 55.4 | 59.7 | 49.0 | 31.5 | 20.3 | 16.5 | 8.9 | 22.9 | 43.2 | 51.6 | 46.7 | 79.2 | 79.2 | | Précipitation Record en 24 heures |
| Years of Record | 11 | 11 | 11 | 10 | 9 | 10 | 7 | 8 | 9 | 9 | 11 | 11 | | | Années de Relèves |
| Days with Rain | 17 | 14 | 16 | 11 | 8 | 8 | 8 | 8 | 8 | 13 | 17 | 19 | 143 | 8 | Jours de Pluie |
| Days with Snow | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 8 | Jours de Neige |
| Days with Precipitation | 19 | 15 | 16 | 11 | 8 | 8 | 6 | 6 | 8 | 13 | 17 | 20 | 147 | 8 | Jours de Précipitation |

# BRITISH COLUMBIA/COLOMBIE-BRITANNIQUE

**BAANICH DOM ASTRO OBS**
48° 31'N 123° 25'W 223 m

| | JAN JAN | FEB FÉV | MAR MAR | APR AVR | MAY MAI | JUN JUIN | JUL JUIL | AUG AOÛT | SEP SEPT | OCT OCT | NOV NOV | DEC DÉC | YEAR ANNÉE | CODE CODE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily Maximum Temperature | 5.1 | 7.4 | 9.0 | 12.6 | 16.7 | 19.6 | 23.1 | 22.2 | 19.7 | 13.9 | 8.9 | 6.2 | 13.7 | 2 | Température Maximale Quotidienne |
| Daily Minimum Temperature | 0.6 | 2.0 | 2.1 | 4.3 | 7.4 | 10.0 | 12.5 | 12.6 | 10.4 | 7.2 | 3.5 | 1.8 | 6.2 | 2 | Température Minimale Quotidienne |
| **Daily Temperature** | **2.9** | **4.7** | **5.6** | **8.5** | **12.1** | **14.8** | **17.8** | **17.4** | **15.0** | **10.6** | **6.2** | **4.0** | **10.0** | **2** | **Température Quotidienne** |
| Standard Deviation, Daily Temperature | 1.6 | 1.6 | 1.2 | 1.1 | 1.3 | 1.6 | 1.5 | 1.5 | 1.5 | 0.9 | 1.3 | 1.4 | 0.6 | 2 | Écart Type de la Température Quotidienne |
| Extreme Maximum Temperature | 13.9 | 17.8 | 20.0 | 26.1 | 30.0 | 36.1 | 38.3 | 35.6 | 33.3 | 26.7 | 18.9 | 14.4 | 38.3 | | Température Maximale Extrême |
| Years of Record | 61 | 61 | 59 | 61 | 61 | 61 | 60 | 60 | 59 | 59 | 60 | 59 | | | Années de Relèves |
| Extreme Minimum Temperature | -14.4 | -13.3 | -9.4 | -3.3 | -1.1 | 3.3 | 6.1 | 6.7 | 2.8 | -3.9 | -12.2 | -16.7 | -16.7 | | Température Minimale Extrême |
| Years of Record | 61 | 61 | 59 | 61 | 59 | 61 | 60 | 60 | 60 | 59 | 60 | 59 | | | Années de Relèves |
| Rainfall | 142.7 | 93.1 | 63.7 | 40.5 | 26.6 | 26.9 | 18.2 | 24.8 | 40.5 | 90.0 | 122.5 | 145.3 | 834.8 | 2 | Chutes de Pluie |
| Snowfall | 22.7 | 8.5 | 6.7 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 18.0 | 59.1 | 2 | Chutes de Neige |
| **Total Precipitation** | **167.4** | **101.8** | **70.4** | **40.7** | **26.6** | **26.9** | **18.2** | **24.8** | **40.5** | **90.0** | **125.5** | **163.3** | **895.9** | **2** | **Précipitations Totales** |
| Standard Deviation, Total Precipitation | 70.9 | 44.1 | 36.1 | 25.4 | 10.4 | 17.3 | 15.9 | 25.3 | 27.0 | 56.3 | 59.8 | 51.0 | 146.3 | 2 | Écart Type des Précipitations Totales |
| Greatest Rainfall in 24 hours | 79.0 | 60.2 | 46.5 | 37.8 | 49.5 | 35.8 | 23.6 | 64.3 | 36.3 | 51.6 | 108.2 | 70.9 | 108.2 | | Chute de Pluie Record en 24 heures |
| Years of Record | 61 | 61 | 61 | 61 | 61 | 61 | 60 | 60 | 59 | 60 | 60 | 61 | | | Années de Relèves |
| Greatest Snowfall in 24 hours | 58.4 | 48.3 | 22.9 | 5.1 | T | T | 0.0 | 0.0 | 0.0 | 2.5 | 27.9 | 58.4 | 58.4 | | Chute de Neige Record en 24 heures |
| Years of Record | 61 | 61 | 61 | 61 | 61 | 61 | 60 | 60 | 60 | 60 | 60 | 61 | | | Années de Relèves |
| Greatest Precipitation in 24 hours | 79.0 | 60.2 | 46.5 | 37.8 | 49.5 | 35.8 | 23.6 | 64.3 | 36.3 | 51.6 | 108.2 | 70.9 | 108.2 | | Précipitation Record en 24 heures |
| Years of Record | 61 | 61 | 61 | 61 | 61 | 61 | 60 | 60 | 59 | 60 | 60 | 61 | | | Années de Relèves |
| Days with Rain | 18 | 14 | 14 | 11 | 8 | 8 | 5 | 5 | 8 | 14 | 17 | 19 | 141 | 2 | Jours de Pluie |
| Days with Snow | 4 | 1 | 1 | * | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 9 | 2 | Jours de Neige |
| Days with Precipitation | 20 | 15 | 15 | 11 | 8 | 8 | 5 | 5 | 8 | 14 | 18 | 21 | 148 | 2 | Jours de Précipitation |

# BRITISH COLUMBIA/COLOMBIE-BRITANNIQUE

**VICTORIA GONZALES HTS**
48° 25'N 123° 19'W 69 m

| | JAN JAN | FEB FÉV | MAR MAR | APR AVR | MAY MAI | JUN JUIN | JUL JUIL | AUG AOÛT | SEP SEPT | OCT OCT | NOV NOV | DEC DÉC | YEAR ANNÉE | CODE CODE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily Maximum Temperature | 6.1 | 8.2 | 9.6 | 12.6 | 15.7 | 17.7 | 19.7 | 19.4 | 18.0 | 13.7 | 9.3 | 7.2 | 13.1 | 1 | Température Maximale Quotidienne |
| Daily Minimum Temperature | 2.1 | 3.4 | 3.7 | 5.6 | 7.9 | 9.8 | 11.1 | 11.3 | 10.4 | 7.9 | 5.0 | 3.3 | 6.8 | 1 | Température Minimale Quotidienne |
| **Daily Temperature** | **4.1** | **5.8** | **6.7** | **9.1** | **11.8** | **13.8** | **15.4** | **15.3** | **14.2** | **10.8** | **7.2** | **5.3** | **10.0** | 1 | **Température Quotidienne** |
| Standard Deviation, Daily Temperature | 1.6 | 1.3 | 1.1 | 0.8 | 1.0 | 0.9 | 0.8 | 0.7 | 1.0 | 0.7 | 1.1 | 1.4 | 0.5 | 1 | Écart Type de la Température Quotidienne |
| Extreme Maximum Temperature | 14.1 | 16.7 | 20.6 | 23.9 | 29.4 | 35.0 | 35.0 | 32.8 | 31.7 | 25.0 | 18.9 | 16.0 | 35.0 | | Température Maximale Extrême |
| Years of Record | 82 | 81 | 82 | 82 | 82 | 82 | 81 | 82 | 82 | 83 | 83 | 83 | | | Années de Relèves |
| Extreme Minimum Temperature | -14.4 | -12.8 | -7.2 | -2.2 | 1.1 | 3.9 | 6.1 | 4.4 | 1.7 | -2.8 | -11.1 | -15.6 | -15.6 | | Température Minimale Extrême |
| Years of Record | 82 | 81 | 82 | 82 | 82 | 82 | 81 | 82 | 82 | 83 | 83 | 83 | | | Années de Relèves |
| Rainfall | 98.0 | 69.4 | 41.6 | 30.2 | 19.3 | 20.1 | 13.4 | 21.0 | 33.5 | 63.4 | 94.1 | 111.4 | 615.6 | 1 | Chutes de Pluie |
| Snowfall | 13.7 | 4.1 | 4.9 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.3 | 7.7 | 32.0 | 1 | Chutes de Neige |
| **Total Precipitation** | **110.7** | **73.6** | **46.9** | **30.4** | **19.3** | **20.1** | **13.4** | **21.0** | **33.5** | **63.4** | **95.7** | **119.2** | **647.2** | 1 | **Précipitations Totales** |
| Standard Deviation, Total Precipitation | 56.9 | 36.9 | 25.2 | 16.5 | 9.8 | 15.7 | 10.7 | 16.9 | 20.4 | 41.7 | 50.8 | 52.6 | 133.3 | 1 | Écart Type des Précipitations Totales |
| Greatest Rainfall in 24 hours | 77.5 | 80.8 | 67.8 | 36.8 | 37.6 | 33.5 | 21.8 | 27.9 | 43.2 | 50.8 | 68.8 | 83.3 | 83.3 | | Chute de Pluie Record en 24 heures |
| Years of Record | 82 | 82 | 81 | 82 | 82 | 82 | 81 | 81 | 82 | 82 | 83 | 83 | | | Années de Relèves |
| Greatest Snowfall in 24 hours | 27.9 | 53.3 | 17.8 | 7.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 21.6 | 28.4 | 53.3 | | Chute de Neige Record en 24 heures |
| Years of Record | 82 | 82 | 82 | 82 | 82 | 82 | 81 | 81 | 82 | 83 | 83 | 83 | | | Années de Relèves |
| Greatest Precipitation in 24 hours | 77.5 | 80.8 | 67.8 | 36.8 | 37.6 | 33.5 | 21.8 | 27.9 | 43.2 | 50.8 | 68.8 | 83.3 | 83.3 | | Précipitation Record en 24 heures |
| Years of Record | 82 | 82 | 81 | 82 | 82 | 82 | 81 | 81 | 82 | 82 | 83 | 83 | | | Années de Relèves |
| Days with Rain | 16 | 14 | 13 | 10 | 8 | 7 | 5 | 6 | 8 | 13 | 16 | 18 | 134 | 1 | Jours de Pluie |
| Days with Snow | 4 | 2 | 2 | * | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 11 | 1 | Jours de Neige |
| Days with Precipitation | 18 | 14 | 14 | 10 | 8 | 7 | 5 | 6 | 8 | 13 | 16 | 19 | 138 | 1 | Jours de Précipitation |

**VICTORIA GORDON HEAD**
48° 28'N 123° 18'W 43 m

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily Maximum Temperature | | | | | | | | | | | | | | Température Maximale Quotidienne |
| Daily Minimum Temperature | | | | | | | | | | | | | | Température Minimale Quotidienne |
| **Daily Temperature** | | | | | | | | | | | | | | **Température Quotidienne** |
| Standard Deviation, Daily Temperature | | | | | | | | | | | | | | Écart Type de la Température Quotidienne |
| Extreme Maximum Temperature | | | | | | | | | | | | | | Température Maximale Extrême |
| Years of Record | | | | | | | | | | | | | | Années de Relèves |
| Extreme Minimum Temperature | | | | | | | | | | | | | | Température Minimale Extrême |
| Years of Record | | | | | | | | | | | | | | Années de Relèves |
| Rainfall | 104.6 | 74.5 | 52.1 | 35.4 | 24.9 | 21.1 | 14.8 | 24.6 | 32.3 | 61.3 | 103.3 | 118.1 | 667.0 | 3 | Chutes de Pluie |
| Snowfall | 11.3 | 3.0 | 3.1 | T | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 9.1 | 28.0 | 3 | Chutes de Neige |
| **Total Precipitation** | **115.9** | **77.5** | **55.3** | **35.5** | **24.9** | **21.1** | **14.8** | **24.6** | **32.3** | **61.3** | **104.8** | **127.1** | **695.1** | **3** | **Précipitations Totales** |
| Standard Deviation, Total Precipitation | 53.1 | 41.4 | 29.5 | 17.6 | 11.0 | 17.7 | 11.4 | 21.3 | 18.3 | 42.3 | 51.4 | 56.2 | 137.2 | 3 | Écart Type des Précipitations Totales |
| Greatest Rainfall in 24 hours | 49.5 | 57.9 | 37.6 | 25.4 | 23.6 | 20.2 | 16.5 | 45.7 | 29.7 | 44.7 | 50.4 | 86.0 | 86.0 | | Chute de Pluie Record en 24 heures |
| Years of Record | 21 | 21 | 21 | 21 | 21 | 21 | 20 | 18 | 21 | 22 | 22 | 22 | | | Années de Relèves |
| Greatest Snowfall in 24 hours | 17.2 | 18.3 | 11.7 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 14.0 | 38.4 | 38.4 | | Chute de Neige Record en 24 heures |
| Years of Record | 20 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 22 | 22 | 22 | | | Années de Relèves |
| Greatest Precipitation in 24 hours | 53.1 | 57.9 | 37.6 | 25.4 | 23.6 | 20.2 | 16.5 | 45.7 | 29.7 | 44.7 | 50.4 | 86.0 | 86.0 | | Précipitation Record en 24 heures |
| Years of Record | 21 | 21 | 21 | 21 | 21 | 21 | 20 | 18 | 21 | 22 | 22 | 22 | | | Années de Relèves |
| Days with Rain | 15 | 14 | 13 | 10 | 8 | 6 | 4 | 6 | 8 | 12 | 17 | 18 | 131 | 6 | Jours de Pluie |
| Days with Snow | 3 | 1 | 1 | * | 0 | 0 | 0 | 0 | 0 | 0 | * | 2 | 7 | 3 | Jours de Neige |
| Days with Precipitation | 17 | 15 | 13 | 10 | 8 | 6 | 4 | 6 | 8 | 12 | 17 | 19 | 135 | 6 | Jours de Précipitation |

## BRITISH COLUMBIA/COLOMBIE-BRITANNIQUE

**VICTORIA HIGHLAND**
48° 30'N 123° 30'W 152 m

| | JAN<br>JAN | FEB<br>FÉV | MAR<br>MAR | APR<br>AVR | MAY<br>MAI | JUN<br>JUIN | JUL<br>JUIL | AUG<br>AOÛT | SEP<br>SEPT | OCT<br>OCT | NOV<br>NOV | DEC<br>DÉC | YEAR<br>ANNÉE | CODE<br>CODE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily Maximum Temperature | | | | | | | | | | | | | | | Température Maximale Quotidienne |
| Daily Minimum Temperature | | | | | | | | | | | | | | | Température Minimale Quotidienne |
| **Daily Temperature** | | | | | | | | | | | | | | | **Température Quotidienne** |
| Standard Deviation, Daily Temperature | | | | | | | | | | | | | | | Écart Type de la Température Quotidienne |
| Extreme Maximum Temperature | | | | | | | | | | | | | | | Température Maximale Extrême |
| Years of Record | | | | | | | | | | | | | | | Années de Relèves |
| Extreme Minimum Temperature | | | | | | | | | | | | | | | Température Minimale Extrême |
| Years of Record | | | | | | | | | | | | | | | Années de Relèves |
| Rainfall | 186.3 | 123.7 | 85.0 | 54.0 | 31.4 | 30.5 | 22.5 | 30.6 | 46.3 | 105.0 | 166.7 | 201.4 | 1083.4 | 8 | Chutes de Pluie |
| Snowfall | 31.7 | 10.8 | 8.0 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.5 | 23.6 | 78.7 | 6 | Chutes de Neige |
| **Total Precipitation** | **213.5** | **134.4** | **92.6** | **54.5** | **31.4** | **30.5** | **22.5** | **30.6** | **46.3** | **105.0** | **170.1** | **225.0** | **1156.6** | **8** | **Précipitations Totales** |
| Standard Deviation, Total Precipitation | 101.0 | 55.4 | 52.5 | 29.5 | 13.5 | 18.6 | 16.9 | 31.1 | 25.4 | 61.5 | 76.9 | 81.9 | 218.8 | 4 | Écart Type des Précipitations Totales |
| Greatest Rainfall in 24 hours | 76.2 | 75.9 | 58.7 | 37.3 | 25.1 | 27.6 | 26.7 | 69.9 | 53.3 | 59.7 | 58.9 | 114.0 | 114.0 | | Chute de Pluie Record en 24 heures |
| Years of Record | 19 | 19 | 16 | 19 | 17 | 19 | 18 | 19 | 19 | 20 | 20 | 19 | | | Années de Relèves |
| Greatest Snowfall in 24 hours | 32.5 | 20.3 | 13.7 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 16.8 | 41.7 | 41.7 | | Chute de Neige Record en 24 heures |
| Years of Record | 19 | 19 | 19 | 19 | 19 | 19 | 20 | 20 | 19 | 20 | 20 | 20 | | | Années de Relèves |
| Greatest Precipitation in 24 hours | 76.2 | 75.9 | 58.7 | 37.3 | 25.1 | 27.6 | 26.7 | 69.9 | 53.3 | 59.7 | 58.9 | 114.0 | 114.0 | | Précipitation Record en 24 heures |
| Years of Record | 19 | 19 | 15 | 19 | 17 | 19 | 18 | 19 | 19 | 20 | 20 | 19 | | | Années de Relèves |
| Days with Rain | 17 | 15 | 15 | 12 | 8 | 8 | 5 | 6 | 9 | 14 | 19 | 19 | 147 | 8 | Jours de Pluie |
| Days with Snow | 5 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 14 | 8 | Jours de Neige |
| Days with Precipitation | 20 | 16 | 16 | 12 | 9 | 8 | 5 | 6 | 8 | 14 | 19 | 22 | 155 | 8 | Jours de Précipitation |

**VICTORIA INT'L A**
48° 39'N 123° 26'W 19 m

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily Maximum Temperature | 6.0 | 8.2 | 9.6 | 12.9 | 16.5 | 19.2 | 21.7 | 21.4 | 19.0 | 14.1 | 9.4 | 7.1 | 13.8 | 1 | Température Maximale Quotidienne |
| Daily Minimum Temperature | 0.1 | 1.3 | 1.7 | 3.9 | 6.7 | 9.4 | 10.8 | 10.7 | 8.7 | 5.6 | 2.5 | 1.3 | 5.2 | 1 | Température Minimale Quotidienne |
| **Daily Temperature** | **3.1** | **4.8** | **5.7** | **8.4** | **11.6** | **14.3** | **16.3** | **16.1** | **13.9** | **9.9** | **6.0** | **4.2** | **9.5** | **1** | **Température Quotidienne** |
| Standard Deviation, Daily Temperature | 1.7 | 1.3 | 0.9 | 0.8 | 1.0 | 1.1 | 0.9 | 0.9 | 1.0 | 0.7 | 1.1 | 1.4 | 0.5 | 1 | Écart Type de la Température Quotidienne |
| Extreme Maximum Temperature | 15.0 | 18.3 | 20.0 | 24.4 | 29.4 | 33.3 | 36.1 | 34.4 | 31.1 | 25.6 | 18.3 | 16.1 | 36.1 | | Température Maximale Extrême |
| Years of Record | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 41 | 41 | 41 | 41 | 41 | | | Années de Relèves |
| Extreme Minimum Temperature | −15.6 | −15.0 | −8.9 | −3.9 | −1.1 | 2.2 | 4.1 | 4.4 | −1.1 | −4.4 | −13.3 | −14.4 | −15.6 | | Température Minimale Extrême |
| Years of Record | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 41 | 41 | 41 | 41 | 41 | | | Années de Relèves |
| Rainfall | 134.0 | 91.1 | 65.5 | 38.9 | 28.5 | 29.0 | 18.1 | 26.7 | 39.6 | 78.4 | 128.4 | 144.4 | 822.6 | 1 | Chutes de Pluie |
| Snowfall | 20.0 | 8.1 | 6.1 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.3 | 13.1 | 49.9 | 1 | Chutes de Neige |
| **Total Precipitation** | **154.3** | **99.2** | **71.7** | **39.3** | **28.5** | **29.0** | **18.1** | **26.7** | **39.6** | **78.4** | **130.8** | **157.3** | **872.9** | **1** | **Précipitations Totales** |
| Standard Deviation, Total Precipitation | 72.0 | 42.2 | 32.5 | 20.2 | 11.9 | 21.9 | 13.2 | 22.0 | 22.9 | 49.8 | 65.6 | 50.6 | 134.1 | 1 | Écart Type des Précipitations Totales |
| Greatest Rainfall in 24 hours | 64.3 | 55.9 | 53.6 | 31.2 | 38.1 | 40.9 | 19.6 | 32.5 | 27.4 | 57.4 | 68.3 | 72.9 | 72.9 | | Chute de Pluie Record en 24 heures |
| Years of Record | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 41 | 41 | 41 | 41 | 41 | | | Années de Relèves |
| Greatest Snowfall in 24 hours | 29.2 | 22.4 | 21.3 | 5.1 | T | 0.0 | 0.0 | 0.0 | T | T | 16.0 | 34.8 | 34.8 | | Chute de Neige Record en 24 heures |
| Years of Record | 40 | 40 | 40 | 40 | 40 | 40 | 41 | 41 | 41 | 41 | 41 | 41 | | | Années de Relèves |
| Greatest Precipitation in 24 hours | 64.3 | 55.9 | 54.1 | 31.2 | 38.1 | 40.9 | 19.6 | 32.5 | 27.4 | 57.4 | 68.3 | 72.9 | 72.9 | | Précipitation Record en 24 heures |
| Years of Record | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 41 | 41 | 41 | 41 | 41 | | | Années de Relèves |
| Days with Rain | 17 | 15 | 15 | 12 | 10 | 9 | 5 | 7 | 9 | 14 | 18 | 19 | 150 | 1 | Jours de Pluie |
| Days with Snow | 5 | 2 | 2 | * | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 13 | 1 | Jours de Neige |
| Days with Precipitation | 19 | 16 | 16 | 12 | 10 | 9 | 5 | 7 | 9 | 14 | 18 | 20 | 155 | 1 | Jours de Précipitation |

## BRITISH COLUMBIA/COLOMBIE-BRITANNIQUE

**VICTORIA LANSDOWNE**
48° 26'N 123° 19'W 29 m

| | JAN JAN | FEB FÉV | MAR MAR | APR AVR | MAY MAI | JUN JUIN | JUL JUIL | AUG AOÛT | SEP SEPT | OCT OCT | NOV NOV | DEC DÉC | YEAR ANNÉE | CODE CODE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily Maximum Temperature | 6.2 | 8.2 | 9.7 | 12.9 | 16.5 | 19.1 | 21.8 | 21.5 | 18.7 | 13.9 | 9.3 | 7.3 | 13.8 | 8 | Température Maximale Quotidienne |
| Daily Minimum Temperature | 1.4 | 2.3 | 2.5 | 4.4 | 6.9 | 9.4 | 10.6 | 10.5 | 8.5 | 6.3 | 4.0 | 2.6 | 5.8 | 8 | Température Minimale Quotidienne |
| **Daily Temperature** | **3.8** | **5.2** | **6.1** | **8.6** | **11.7** | **14.3** | **16.2** | **16.0** | **13.6** | **10.1** | **6.7** | **5.0** | **9.8** | **8** | **Température Quotidienne** |
| Standard Deviation, Daily Temperature | 1.9 | 1.8 | 1.1 | 1.0 | 1.4 | 1.3 | 1.5 | 1.0 | 0.9 | 0.5 | 1.5 | 1.0 | 0.8 | 6 | Écart Type de la Température Quotidienne |
| Extreme Maximum Temperature | 13.3 | 13.9 | 16.7 | 21.1 | 27.8 | 30.0 | 35.0 | 32.2 | 27.8 | 21.1 | 16.7 | 13.9 | 35.0 | | Température Maximale Extrême |
| Years of Record | 9 | 9 | 9 | 9 | 9 | 9 | 8 | 8 | 8 | 8 | 8 | 7 | | | Années de Relèves |
| Extreme Minimum Temperature | -12.2 | -10.0 | -7.8 | -1.7 | -1.7 | 3.3 | 6.1 | 5.6 | 2.2 | -0.6 | -13.3 | -8.3 | -13.3 | | Température Minimale Extrême |
| Years of Record | 9 | 9 | 9 | 9 | 9 | 9 | 8 | 8 | 8 | 8 | 8 | 7 | | | Années de Relèves |
| Rainfall | 100.2 | 73.2 | 45.2 | 27.3 | 18.7 | 21.7 | 13.5 | 18.1 | 33.1 | 60.9 | 91.3 | 110.3 | 613.5 | 8 | Chutes de Pluie |
| Snowfall | 8.8 | 2.9 | 1.5 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 5.0 | 19.7 | 8 | Chutes de Neige |
| **Total Precipitation** | **109.4** | **77.4** | **46.1** | **27.8** | **18.7** | **21.7** | **13.5** | **18.1** | **33.1** | **60.9** | **93.1** | **116.2** | **635.8** | **8** | **Précipitations Totales** |
| Standard Deviation, Total Precipitation | 47.5 | 41.6 | 26.1 | 19.1 | 9.6 | 19.5 | 11.6 | 15.1 | 25.1 | 31.3 | 58.2 | 46.8 | 99.4 | 6 | Écart Type des Précipitations Totales |
| Greatest Rainfall in 24 hours | 38.1 | 51.1 | 23.9 | 23.6 | 10.2 | 26.7 | 15.2 | 23.4 | 16.0 | 38.4 | 81.8 | 66.0 | 81.8 | | Chute de Pluie Record en 24 heures |
| Years of Record | 9 | 8 | 9 | 9 | 7 | 9 | 8 | 8 | 7 | 8 | 8 | 6 | | | Années de Relèves |
| Greatest Snowfall in 24 hours | 22.9 | 15.2 | 14.7 | 8.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 12.7 | 15.0 | 22.9 | | Chute de Neige Record en 24 heures |
| Years of Record | 9 | 9 | 9 | 9 | 9 | 9 | 8 | 8 | 8 | 8 | 8 | 8 | | | Années de Relèves |
| Greatest Precipitation in 24 hours | 38.1 | 51.1 | 23.9 | 23.6 | 10.2 | 26.7 | 15.2 | 23.4 | 16.0 | 38.4 | 81.8 | 66.0 | 81.8 | | Précipitation Record en 24 heures |
| Years of Record | 9 | 9 | 9 | 9 | 7 | 9 | 8 | 8 | 7 | 8 | 8 | 6 | | | Années de Relèves |
| Days with Rain | 16 | 14 | 12 | 9 | 7 | 7 | 5 | 6 | 8 | 13 | 16 | 18 | 131 | 8 | Jours de Pluie |
| Days with Snow | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 8 | Jours de Neige |
| Days with Precipitation | 17 | 14 | 13 | 9 | 7 | 7 | 5 | 6 | 8 | 13 | 16 | 19 | 134 | 8 | Jours de Précipitation |

**VICTORIA MARINE**
48° 22'N 123° 45'W 32 m

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Daily Maximum Temperature** | 6.1 | 8.3 | 9.4 | 11.8 | 14.3 | 16.3 | 18.2 | 18.3 | 16.9 | 13.3 | 9.3 | 7.2 | 12.5 | 8 | **Température Maximale Quotidienne** |
| **Daily Minimum Temperature** | 1.3 | 2.4 | 2.4 | 4.2 | 6.6 | 8.8 | 9.8 | 10.1 | 9.0 | 6.5 | 3.9 | 2.5 | 5.6 | 8 | **Température Minimale Quotidienne** |
| **Daily Temperature** | 3.8 | 5.4 | 5.9 | 8.0 | 10.4 | 12.5 | 14.0 | 14.2 | 13.0 | 9.9 | 6.6 | 4.9 | 9.1 | 8 | **Température Quotidienne** |
| Standard Deviation, Daily Temperature | 1.7 | 1.2 | 0.9 | 0.8 | 0.8 | 0.9 | 0.6 | 0.8 | 0.9 | 0.7 | 0.9 | 1.6 | 0.3 | 5 | Écart Type de la Température Quotidienne |
| Extreme Maximum Temperature | 13.3 | 15.0 | 15.6 | 22.2 | 23.9 | 28.3 | 29.4 | 26.6 | 27.2 | 20.9 | 19.4 | 15.9 | 29.4 | | Température Maximale Extrême |
| Years of Record | 13 | 13 | 13 | 13 | 13 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | | | Années de Relèves |
| Extreme Minimum Temperature | -10.6 | -4.4 | -4.4 | -2.2 | 0.0 | 3.3 | 5.0 | 4.4 | 1.7 | -2.8 | -3.9 | -13.9 | -13.9 | | Température Minimale Extrême |
| Years of Record | 13 | 13 | 13 | 13 | 13 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | | | Années de Relèves |
| Rainfall | 212.1 | 150.1 | 106.8 | 69.4 | 39.1 | 26.3 | 22.7 | 26.5 | 62.0 | 132.1 | 185.1 | 219.6 | 1251.8 | 8 | Chutes de Pluie |
| Snowfall | 11.1 | 3.9 | 8.3 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.4 | 7.9 | 33.5 | 8 | Chutes de Neige |
| **Total Precipitation** | 225.0 | 155.5 | 114.4 | 70.7 | 39.1 | 26.3 | 22.7 | 26.5 | 62.0 | 132.1 | 186.1 | 227.0 | 1257.4 | 8 | **Précipitations Totales** |
| Standard Deviation, Total Precipitation | 78.3 | 62.9 | 45.6 | 36.7 | 18.8 | 14.6 | 21.6 | 34.1 | 38.6 | 97.0 | 81.8 | 81.3 | 222.6 | 5 | Écart Type des Précipitations Totales |
| Greatest Rainfall in 24 hours | 61.0 | 59.4 | 106.7 | 38.9 | 18.5 | 25.9 | 42.7 | 23.1 | 39.4 | 44.7 | 84.6 | 100.8 | 106.7 | | Chute de Pluie Record en 24 heures |
| Years of Record | 13 | 13 | 13 | 13 | 13 | 14 | 14 | 13 | 13 | 13 | 14 | 14 | | | Années de Relèves |
| Greatest Snowfall in 24 hours | 21.6 | 8.4 | 7.9 | 2.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.1 | 16.5 | 21.6 | | Chute de Neige Record en 24 heures |
| Years of Record | 13 | 13 | 12 | 13 | 13 | 14 | 14 | 13 | 13 | 13 | 13 | 14 | | | Années de Relèves |
| Greatest Precipitation in 24 hours | 61.0 | 59.4 | 106.7 | 38.9 | 18.5 | 25.9 | 42.7 | 23.1 | 39.4 | 44.7 | 84.6 | 100.8 | 106.7 | | Précipitation Record en 24 heures |
| Years of Record | 13 | 13 | 13 | 13 | 13 | 14 | 14 | 13 | 13 | 13 | 14 | 14 | | | Années de Relèves |
| Days with Rain | 20 | 16 | 16 | 14 | 10 | 8 | 5 | 7 | 11 | 16 | 21 | 21 | 165 | 8 | Jours de Pluie |
| Days with Snow | 4 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 12 | 8 | Jours de Neige |
| Days with Precipitation | 21 | 16 | 18 | 14 | 10 | 8 | 5 | 7 | 11 | 16 | 21 | 22 | 169 | 8 | Jours de Précipitation |

## BRITISH COLUMBIA/COLOMBIE-BRITANNIQUE

**VICTORIA PHYLLIS STREET**
48° 27'N 123° 16'W 8 m

| | JAN JAN | FEB FÉV | MAR MAR | APR AVR | MAY MAI | JUN JUIN | JUL JUIL | AUG AOÛT | SEP SEPT | OCT OCT | NOV NOV | DEC DÉC | YEAR ANNÉE | CODE CODE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily Maximum Temperature | 6.4 | 8.1 | 9.1 | 12.2 | 15.7 | 17.6 | 19.8 | 19.4 | 17.0 | 12.7 | 9.2 | 7.3 | 12.9 | 8 | Température Maximale Quotidienne |
| Daily Minimum Temperature | 2.9 | 4.0 | 4.1 | 5.8 | 8.3 | 10.2 | 11.2 | 11.4 | 10.2 | 8.2 | 5.7 | 4.0 | 7.2 | 8 | Température Minimale Quotidienne |
| **Daily Temperature** | **5.0** | **6.0** | **6.8** | **9.2** | **12.2** | **14.1** | **15.6** | **15.5** | **13.7** | **10.6** | **7.7** | **5.8** | **10.2** | **8** | **Température Quotidienne** |
| Standard Deviation, Daily Temperature | 1.1 | 1.0 | 1.0 | 0.8 | 0.8 | 1.0 | 0.5 | 0.9 | 1.0 | 0.5 | 0.8 | 1.1 | 0.3 | 6 | Écart Type de la Température Quotidienne |
| Extreme Maximum Temperature | 12.8 | 13.3 | 16.1 | 21.1 | 25.0 | 26.7 | 26.7 | 27.8 | 25.6 | 20.6 | 16.1 | 14.0 | 27.8 | | Température Maximale Extrême |
| Years of Record | 7 | 7 | 6 | 7 | 7 | 6 | 7 | 5 | 7 | 7 | 7 | 8 | | | Années de Relèves |
| Extreme Minimum Temperature | -5.6 | -2.2 | -3.9 | 0.6 | 3.9 | 5.6 | 8.0 | 7.0 | 6.1 | 1.7 | -2.8 | -7.8 | -7.8 | | Température Minimale Extrême |
| Years of Record | 6 | 7 | 7 | 6 | 7 | 6 | 7 | 5 | 7 | 7 | 7 | 8 | | | Années de Relèves |
| Rainfall | 110.5 | 79.3 | 54.9 | 36.0 | 24.4 | 25.5 | 15.7 | 26.5 | 36.7 | 68.3 | 105.3 | 121.0 | 704.1 | 8 | Chutes de Pluie |
| Snowfall | 8.8 | 3.0 | 4.4 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 2.6 | 19.5 | 8 | Chutes de Neige |
| **Total Precipitation** | **118.9** | **82.0** | **59.4** | **36.3** | **24.4** | **25.5** | **15.7** | **26.5** | **36.7** | **68.3** | **104.7** | **126.0** | **724.4** | **8** | **Précipitations Totales** |
| Standard Deviation, Total Precipitation | 54.1 | 32.5 | 18.8 | 8.4 | 10.0 | 24.5 | 8.8 | 25.2 | 17.3 | 36.1 | 80.0 | 75.2 | 114.1 | 6 | Écart Type des Précipitations Totales |
| Greatest Rainfall in 24 hours | 36.3 | 50.3 | 16.3 | 12.4 | 15.5 | 17.7 | 14.0 | 49.8 | 17.4 | 27.7 | 41.2 | 97.6 | 97.6 | | Chute de Pluie Record en 24 heures |
| Years of Record | 7 | 7 | 7 | 6 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | | | Années de Relèves |
| Greatest Snowfall in 24 hours | 12.0 | 11.4 | T | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.1 | 4.2 | 12.0 | | Chute de Neige Record en 24 heures |
| Years of Record | 7 | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | | | Années de Relèves |
| Greatest Precipitation in 24 hours | 41.4 | 50.3 | 16.3 | 12.4 | 15.5 | 17.7 | 14.0 | 49.8 | 17.4 | 27.7 | 41.2 | 97.6 | 97.6 | | Précipitation Record en 24 heures |
| Years of Record | 7 | 7 | 7 | 6 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | | | Années de Relèves |
| Days with Rain | 20 | 15 | 16 | 13 | 9 | 8 | 6 | 7 | 11 | 14 | 19 | 20 | 158 | 8 | Jours de Pluie |
| Days with Snow | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 8 | Jours de Neige |
| Days with Precipitation | 22 | 15 | 17 | 13 | 9 | 8 | 6 | 7 | 11 | 14 | 19 | 20 | 161 | 8 | Jours de Précipitation |

**VICTORIA SHELBOURNE**
48° 28'N 123° 20'W 38 m

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily Maximum Temperature | | | | | | | | | | | | | | | Température Maximale Quotidienne |
| Daily Minimum Temperature | | | | | | | | | | | | | | | Température Minimale Quotidienne |
| **Daily Temperature** | | | | | | | | | | | | | | | **Température Quotidienne** |
| Standard Deviation, Daily Temperature | | | | | | | | | | | | | | | Écart Type de la Température Quotidienne |
| Extreme Maximum Temperature | | | | | | | | | | | | | | | Température Maximale Extrême |
| Years of Record | | | | | | | | | | | | | | | Années de Relèves |
| Extreme Minimum Temperature | | | | | | | | | | | | | | | Température Minimale Extrême |
| Years of Record | | | | | | | | | | | | | | | Années de Relèves |
| Rainfall | 127.8 | 83.5 | 58.8 | 37.0 | 23.2 | 23.4 | 14.4 | 22.4 | 34.4 | 73.3 | 115.4 | 143.0 | 756.6 | 8 | Chutes de Pluie |
| Snowfall | 10.8 | 4.4 | 2.5 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.4 | 7.0 | 26.3 | 8 | Chutes de Neige |
| **Total Precipitation** | **143.5** | **88.0** | **63.2** | **37.3** | **23.2** | **23.4** | **14.4** | **22.4** | **34.4** | **73.3** | **116.9** | **150.0** | **790.0** | **8** | **Précipitations Totales** |
| Standard Deviation, Total Precipitation | 48.2 | 43.8 | 40.1 | 20.7 | 7.6 | 10.6 | 13.0 | 19.5 | 17.8 | 56.1 | 35.0 | 49.0 | 155.0 | 5 | Écart Type des Précipitations Totales |
| Greatest Rainfall in 24 hours | 44.2 | 52.1 | 48.8 | 26.4 | 21.3 | 17.5 | 15.0 | 26.9 | 34.5 | 36.6 | 39.9 | 73.9 | 73.9 | | Chute de Pluie Record en 24 heures |
| Years of Record | 10 | 10 | 10 | 10 | 11 | 11 | 11 | 10 | 10 | 10 | 10 | 10 | | | Années de Relèves |
| Greatest Snowfall in 24 hours | 27.9 | 6.4 | 5.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.4 | 40.6 | 40.6 | | Chute de Neige Record en 24 heures |
| Years of Record | 10 | 10 | 10 | 10 | 11 | 11 | 11 | 10 | 10 | 10 | 10 | 10 | | | Années de Relèves |
| Greatest Precipitation in 24 hours | 44.2 | 52.1 | 48.8 | 26.4 | 21.3 | 17.5 | 15.0 | 26.9 | 34.5 | 36.6 | 39.9 | 73.9 | 73.9 | | Précipitation Record en 24 heures |
| Years of Record | 10 | 10 | 10 | 10 | 11 | 11 | 11 | 10 | 10 | 10 | 10 | 10 | | | Années de Relèves |
| Days with Rain | 17 | 17 | 15 | 11 | 8 | 8 | 5 | 7 | 9 | 13 | 16 | 20 | 148 | 8 | Jours de Pluie |
| Days with Snow | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 8 | Jours de Neige |
| Days with Precipitation | 20 | 16 | 15 | 12 | 8 | 8 | 5 | 6 | 9 | 14 | 17 | 21 | 151 | 8 | Jours de Précipitation |

# BRITISH COLUMBIA/COLOMBIE-BRITANNIQUE

**VICTORIA SHORT STREET**
48° 27'N 123° 22'W 21 m

| | JAN JAN | FEB FEV | MAR MAR | APR AVR | MAY MAI | JUN JUIN | JUL JUIL | AUG AOÛT | SEP SEPT | OCT OCT | NOV NOV | DEC DÉC | YEAR ANNÉE | CODE CODE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily Maximum Temperature | 6.5 | 8.4 | 10.3 | 13.7 | 17.6 | 20.1 | 22.6 | 22.1 | 19.6 | 14.5 | 9.7 | 7.5 | 14.4 | 8 | Température Maximale Quotidienne |
| Daily Minimum Temperature | 1.2 | 2.3 | 2.2 | 4.1 | 7.0 | 9.6 | 11.0 | 11.0 | 9.1 | 6.3 | 3.7 | 2.2 | 5.8 | 8 | Température Minimale Quotidienne |
| **Daily Temperature** | **4.1** | **5.7** | **6.6** | **9.3** | **12.7** | **15.2** | **17.1** | **16.9** | **14.7** | **10.7** | **7.0** | **5.1** | **10.4** | **8** | **Température Quotidienne** |
| Standard Deviation, Daily Temperature | 1.7 | 1.1 | 0.9 | 0.9 | 0.9 | 1.2 | 0.8 | 1.1 | 1.1 | 0.8 | 0.9 | 1.6 | 0.4 | 5 | Écart Type de la Température Quotidienne |
| Extreme Maximum Temperature | 13.9 | 17.2 | 20.0 | 22.2 | 29.4 | 32.8 | 34.4 | 31.7 | 30.0 | 24.4 | 16.7 | 15.0 | 34.4 | | Température Maximale Extrême |
| Years of Record | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 11 | 11 | 12 | 12 | | | Années de Relèves |
| Extreme Minimum Temperature | -13.9 | -7.2 | -3.9 | -1.7 | -0.6 | 4.4 | 4.4 | 5.0 | -0.6 | -2.8 | -3.9 | -14.4 | -14.4 | | Température Minimale Extrême |
| Years of Record | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 11 | 11 | 12 | 12 | | | Années de Relèves |
| Rainfall | 131.9 | 88.7 | 59.7 | 36.6 | 24.0 | 23.0 | 15.6 | 23.6 | 35.2 | 76.8 | 119.4 | 150.9 | 785.4 | 8 | Chutes de Pluie |
| Snowfall | 7.6 | 3.4 | 2.4 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.6 | 6.1 | 21.3 | 8 | Chutes de Neige |
| **Total Precipitation** | **143.9** | **92.8** | **62.2** | **36.9** | **24.0** | **23.0** | **15.6** | **23.6** | **35.2** | **76.8** | **121.1** | **154.7** | **809.8** | **8** | **Précipitations Totales** |
| Standard Deviation, Total Precipitation | 56.6 | 45.0 | 40.5 | 24.1 | 8.3 | 11.3 | 14.4 | 21.6 | 17.8 | 60.2 | 52.0 | 43.3 | 125.7 | 5 | Écart Type des Précipitations Totales |
| Greatest Rainfall in 24 hours | 49.0 | 49.0 | 46.7 | 26.2 | 17.8 | 17.5 | 15.5 | 22.4 | 42.7 | 53.3 | 50.0 | 65.8 | 65.8 | | Chute de Pluie Record en 24 heures |
| Years of Record | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 11 | 11 | 12 | 12 | | | Années de Relèves |
| Greatest Snowfall in 24 hours | 20.3 | 10.2 | 7.6 | T | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.8 | 38.1 | 38.1 | | Chute de Neige Record en 24 heures |
| Years of Record | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 11 | 11 | 12 | 12 | | | Années de Relèves |
| Greatest Precipitation in 24 hours | 49.0 | 49.0 | 46.7 | 26.2 | 17.8 | 17.5 | 15.5 | 22.4 | 42.7 | 53.3 | 50.0 | 65.8 | 65.8 | | Précipitation Record en 24 heures |
| Years of Record | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 11 | 11 | 12 | 12 | | | Années de Relèves |
| Days with Rain | 17 | 15 | 14 | 10 | 8 | 7 | 5 | 6 | 8 | 13 | 17 | 20 | 140 | 8 | Jours de Pluie |
| Days with Snow | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 6 | 8 | Jours de Neige |
| Days with Precipitation | 18 | 16 | 14 | 10 | 8 | 7 | 5 | 6 | 8 | 13 | 17 | 20 | 142 | 8 | Jours de Précipitation |

**VICTORIA TILLICUM**
48° 27'N 123° 23'W 23 m

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily Maximum Temperature | 6.6 | 9.0 | 10.7 | 13.6 | 17.3 | 20.5 | 23.4 | 22.6 | 19.8 | 14.6 | 9.8 | 7.5 | 14.8 | 3 | Température Maximale Quotidienne |
| Daily Minimum Temperature | 0.9 | 2.2 | 2.1 | 3.9 | 6.2 | 9.1 | 10.2 | 10.3 | 8.0 | 5.4 | 3.2 | 1.9 | 5.3 | 3 | Température Minimale Quotidienne |
| **Daily Temperature** | **3.7** | **5.6** | **6.4** | **8.8** | **11.8** | **14.8** | **16.8** | **16.5** | **13.9** | **10.1** | **6.5** | **4.8** | **10.0** | **3** | **Température Quotidienne** |
| Standard Deviation, Daily Temperature | 1.5 | 1.1 | 0.9 | 0.8 | 0.9 | 1.2 | 1.0 | 1.0 | 1.1 | 0.7 | 1.0 | 1.4 | 0.3 | 3 | Écart Type de la Température Quotidienne |
| Extreme Maximum Temperature | 14.4 | 17.8 | 20.0 | 23.9 | 30.6 | 32.2 | 35.6 | 34.4 | 30.6 | 24.4 | 18.3 | 14.4 | 35.6 | | Température Maximale Extrême |
| Years of Record | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | | | Années de Relèves |
| Extreme Minimum Temperature | −15.6 | −9.4 | −6.1 | −3.9 | −1.7 | 1.1 | 3.3 | 2.8 | −2.2 | −5.6 | −7.0 | −13.9 | −15.6 | | Température Minimale Extrême |
| Years of Record | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | | | Années de Relèves |
| Rainfall | 128.3 | 91.7 | 65.0 | 41.2 | 26.5 | 20.3 | 15.3 | 25.9 | 39.9 | 82.1 | 124.4 | 142.6 | 803.2 | 3 | Chutes de Pluie |
| Snowfall | 13.0 | 3.1 | 3.4 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.1 | 9.3 | 31.0 | 3 | Chutes de Neige |
| **Total Precipitation** | **141.3** | **94.8** | **68.4** | **41.2** | **26.5** | **20.3** | **15.3** | **25.9** | **39.9** | **82.1** | **126.4** | **151.9** | **834.0** | **3** | **Précipitations Totales** |
| Standard Deviation, Total Precipitation | 61.8 | 50.8 | 35.9 | 21.5 | 9.1 | 14.4 | 13.2 | 22.3 | 21.7 | 54.3 | 58.3 | 60.3 | 154.4 | 3 | Écart Type des Précipitations Totales |
| Greatest Rainfall in 24 hours | 51.8 | 65.3 | 48.3 | 28.7 | 19.8 | 19.6 | 21.3 | 55.9 | 39.6 | 54.9 | 46.5 | 94.5 | 94.5 | | Chute de Pluie Record en 24 heures |
| Years of Record | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | | | Années de Relèves |
| Greatest Snowfall in 24 hours | 21.6 | 11.4 | 15.2 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T | 10.9 | 43.2 | 43.2 | | Chute de Neige Record en 24 heures |
| Years of Record | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | | | Années de Relèves |
| Greatest Precipitation in 24 hours | 54.9 | 65.3 | 48.3 | 28.7 | 19.8 | 19.6 | 21.3 | 55.9 | 39.6 | 54.9 | 46.5 | 94.5 | 94.5 | | Précipitation Record en 24 heures |
| Years of Record | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | | | Années de Relèves |
| Days with Rain | 17 | 15 | 15 | 12 | 8 | 7 | 5 | 7 | 9 | 14 | 18 | 20 | 147 | 3 | Jours de Pluie |
| Days with Snow | 3 | 1 | 1 | * | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 8 | 3 | Jours de Neige |
| Days with Precipitation | 19 | 16 | 16 | 12 | 8 | 7 | 5 | 7 | 9 | 14 | 18 | 21 | 152 | 3 | Jours de Précipitation |

# APPENDIX B

Water Survey Canada Hydrometric Stations

Mean Monthly and Mean Annual Discharge

CRAIGFLOWER CREEK BELOW BURNSIDE ROAD, VICTORIA - STATION NO. 08HA034

MONTHLY AND ANNUAL MEAN DISCHARGES IN CUBIC METRES PER SECOND FOR THE PERIOD OF RECORD

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | MEAN | YEAR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1974 | --- | --- | --- | --- | --- | --- | 0.007 | 0.005 | 0.005 | 0.005 | 0.112 | 0.807 | --- | 1974 |
| 1975 | 1.52 | 0.910 | 0.414 | 0.165 | 0.063 | 0.011 | 0.029 | 0.041 | 0.027 | 0.112 | --- | --- | --- | 1975 |
| 1976 | --- | --- | 0.765 | 0.420 | 0.058 | 0.069 | 0.008 | 0.066 | 0.058 | 0.007 | --- | --- | --- | 1976 |
| 1977 | 0.587 | 0.409 | --- | 0.209 | 0.044 | 0.092 | 0.002 | 0.005 | 0.002 | 0.018 | 0.590 | 1.51 | --- | 1977 |
| 1978 | 1.13 | 0.642 | 0.223 | 0.141 | 0.034 | 0.008 | 0.007 | 0.010 | 0.009 | 0.007 | 0.034 | 0.195 | 0.219 | 1978 |
| 1979 | 0.306 | 1.16 | 0.810 | 0.135 | 0.027 | 0.009 | 0.006 | 0.006 | 0.007 | 0.007 | 0.008 | 1.68 | 0.343 | 1979 |
| 1980 | 1.11 | 0.666 | 0.570 | 0.160 | 0.036 | 0.051 | --- | --- | 0.014 | 0.008 | --- | --- | --- | 1980 |
| 1981 | 0.763 | 1.22 | 0.261 | 0.218 | 0.135 | 0.076 | 0.011 | 0.002 | 0.006 | 0.024 | 0.553 | 1.42 | 0.360 | 1981 |
| MEAN | 0.886 | 0.835 | 0.507 | 0.207 | 0.057 | 0.045 | 0.010 | 0.020 | 0.016 | 0.024 | 0.259 | 1.12 | 0.307 | MEAN |

LOCATION - LAT 48 27 47 N DRAINAGE AREA, 13.5 km²
LONG 123 26 19 W NATURAL FLOW

CRAIGFLOWER CREEK BELOW BURNSIDE ROAD, VICTORIA - STATION NO. 08HA034

ANNUAL EXTREMES OF DISCHARGE AND ANNUAL TOTAL DISCHARGE FOR THE PERIOD OF RECORD

| YEAR | MAXIMUM INSTANTANEOUS DISCHARGE ($m^3/s$) | MAXIMUM DAILY DISCHARGE ($m^3/s$) | MINIMUM DAILY DISCHARGE ($m^3/s$) | TOTAL DISCHARGE ($dam^3$) | YEAR |
|---|---|---|---|---|---|
| 1974 | --- | 2.32E ON DEC 21 | 0.004 ON SEP 28 | --- | 1974 |
| 1975 | --- | 2.53 ON NOV 15 | 0.001 ON JUN 14 | --- | 1975 |
| 1976 | --- | --- | 0.005 ON JUN 28 | --- | 1976 |
| 1977 | --- | 3.51 ON MAR 10 | 0 ON JUN 15 * | --- | 1977 |
| 1978 | --- | 2.45 ON JAN 15 | 0.005 ON OCT 08 | 6 890 | 1978 |
| 1979 | --- | 7.87E ON DEC 14 * | 0.005 ON JUL 12 | 10 800 | 1979 |
| 1980 | --- | --- | --- | --- | 1980 |
| 1981 | --- | 4.56 ON FEB 17 | 0.002 ON AUG 04 | 11 400 | 1981 |
| | | | | 9 700 | MEAN |

E - ESTIMATED * - EXTREME RECORDED FOR THE PERIOD OF RECORD

COLQUITZ RIVER AT HYACINTH ROAD - STATION NO. 08HA037

MONTHLY AND ANNUAL MEAN DISCHARGES IN CUBIC METRES PER SECOND FOR THE PERIOD OF RECORD

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | MEAN | YEAR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1976 | --- | 2.10 | 0.810 | 0.460 | 0.102 | --- | --- | 0.068 | 0.057 | 0.058 | 0.090 | 0.125 | --- | 1976 |
| 1977 | 0.172 | 0.127 | 0.752 | 0.064 | --- | --- | --- | --- | 0.007 | 0.011 | 0.121 | 1.07 | --- | 1977 |
| 1978 | 0.957 | 0.926 | 0.494 | 0.269 | 0.097 | 0.057 | 0.035 | 0.041 | 0.049 | 0.033 | 0.093 | 0.189 | 0.266 | 1978 |
| 1979 | 0.133 | 0.989 | 0.506 | 0.129 | 0.057 | 0.021 | 0.023 | 0.018 | 0.030 | 0.024 | 0.017 | 1.54 | 0.288 | 1979 |
| 1980 | 1.02 | 0.709 | 0.484 | 0.122 | 0.062 | 0.095 | 0.035 | 0.035 | 0.064 | 0.030 | 0.930 | 2.50 | 0.508 | 1980 |
| 1981 | 0.908 | 1.30 | 0.322 | 0.372 | 0.169 | 0.136 | 0.049 | 0.034 | --- | --- | --- | --- | --- | 1981 |
| MEAN | 0.638 | 1.03 | 0.561 | 0.236 | 0.097 | 0.077 | 0.036 | 0.039 | 0.041 | 0.031 | 0.290 | 1.08 | 0.354 | MEAN |

LOCATION - LAT 48 28 09 N
LONG 123 24 08 W REGULATED

COLQUITZ RIVER AT HYACINTH ROAD - STATION NO. 08HA037

ANNUAL EXTREMES OF DISCHARGE AND ANNUAL TOTAL DISCHARGE FOR THE PERIOD OF RECORD

| YEAR | MAXIMUM INSTANTANEOUS DISCHARGE ($m^3/s$) | MAXIMUM DAILY DISCHARGE ($m^3/s$) | MINIMUM DAILY DISCHARGE ($m^3/s$) | TOTAL DISCHARGE ($dam^3$) | YEAR |
|---|---|---|---|---|---|
| 1976 | --- | --- | --- | --- | 1976 |
| 1977 | --- | 2.77A ON MAR 09 | 0.005A ON SEP 11 | --- | 1977 |
| 1978 | 2.25 AT 16:30 PST ON JAN 08 | 2.12 ON JAN 08 | 0.018 ON JUL 25 | 8 400 | 1978 |
| 1979 | 7.62 AT 20:35 PST ON DEC 14 * | 6.42 ON DEC 14 * | 0 ON MAY 23 * | 9 080 | 1979 |
| 1980 | 6.49 AT 04:28 PST ON DEC 27 | 6.32 ON DEC 27 | 0.002 ON JUL 25 | 16 100 | 1980 |
| 1981 | 5.44 AT 04:11 PST ON FEB 17 | 5.09 ON FEB 17 | 0.007 ON AUG 24 | --- | 1981 |
| | | | | 11 200 | MEAN |

A - MANUAL GAUGE
(SEE REFERENCE INDEX)

* - EXTREME RECORDED FOR THE PERIOD OF RECORD

COLQUITZ RIVER AT VIOLET AVENUE - STATION NO. 08HA047

MONTHLY AND ANNUAL MEAN DISCHARGES IN CUBIC METRES PER SECOND FOR THE PERIOD OF RECORD

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | MEAN | YEAR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1981 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 0.170 | 0.598 | 2.03 | --- | 1981 |
| 1982 | 1.24 | 2.25 | 0.699 | 0.342 | 0.110 | 0.096 | 0.106 | 0.081 | 0.077 | 0.099 | 0.174 | 1.30 | 0.708 | 1982 |
| 1983 | 2.27 | 1.13 | 0.800 | 0.346 | 0.173 | 0.086 | 0.097 | 0.058 | 0.189 | 0.183 | 0.986 | 1.08 | 0.614 | 1983 |
| 1984 | 1.88 | 0.654 | 0.587 | 0.310 | 0.275 | 0.203 | 0.165 | 0.062 | 0.078 | 0.196 | 1.18 | 1.36 | 0.580 | 1984 |
| 1985 | 0.942 | 0.862 | 0.279 | 0.278 | 0.170 | 0.141 | 0.064 | 0.054 | 0.038 | 0.216 | 0.412 | 0.425 | 0.320 | 1985 |
| 1986 | 1.38 | 1.93 | 0.794 | 0.464 | 0.373 | 0.133 | 0.088 | 0.060 | 0.070 | 0.075 | 0.760 | 0.410 | 0.536 | 1986 |
| 1987 | 0.840 | 0.758 | 0.578 | 0.237 | 0.177 | 0.089 | 0.062 | 0.059 | 0.039 | 0.027 | 0.061 | 0.389 | 0.272 | 1987 |
| 1988 | 0.509 | 0.518 | 0.691 | 0.818 | 0.197 | 0.102 | 0.068 | 0.076 | 0.090 | 0.179 | 0.737 | 1.24 | 0.452 | 1988 |
| 1989 | 2.05 | 0.915 | 1.12 | 0.943 | 0.193 | 0.113 | 0.080 | 0.065 | 0.049 | 0.093 | 0.368 | 0.915 | 0.575 | 1989 |
| 1990 | 1.72 | 2.22 | 0.531 | 0.279 | 0.145 | 0.168 | 0.173 | 0.135 | 0.084 | 0.258 | 4.21 | 2.79 | 1.05 | 1990 |
| MEAN | 1.65 | 1.25 | 0.698 | 0.446 | 0.201 | 0.126 | 0.100 | 0.072 | 0.079 | 0.150 | 0.949 | 1.19 | 0.567 | MEAN |

LOCATION - LAT 48 28 03 N
LONG 123 23 56 W REGULATED



COLQUITZ RIVER AT VIOLET AVENUE - STATION NO. 08HA047

ANNUAL EXTREMES OF DISCHARGE AND ANNUAL TOTAL DISCHARGE FOR THE PERIOD OF RECORD

| YEAR | MAXIMUM INSTANTANEOUS DISCHARGE ($m^3/s$) | MAXIMUM DAILY DISCHARGE ($m^3/s$) | MINIMUM DAILY DISCHARGE ($m^3/s$) | TOTAL DISCHARGE ($dam^3$) | YEAR |
|---|---|---|---|---|---|
| 1981 | --- | --- | --- | --- | 1981 |
| 1982 | 11.6 AT 04:53 PST ON JAN 24 | 11.2 ON JAN 24 | 0.039 ON JUN 07 | 22 300 | 1982 |
| 1983 | 10.3 AT 23:05 PST ON JAN 09 | 9.44 ON JAN 10 | 0.042 ON AUG 02 | 19 400 | 1983 |
| 1984 | 6.02 AT 12:00 PST ON JAN 04 | 5.74 ON JAN 04 | 0.022 ON OCT 01 | 18 300 | 1984 |
| 1985 | 2.67 AT 15:13 PST ON NOV 01 | 2.16 ON FEB 11 | 0.027 ON SEP 20 | 10 100 | 1985 |
| 1986 | 10.1 AT 23:37 PST ON FEB 24 | 8.88 ON FEB 25 | 0.036 ON AUG 11 | 16 900 | 1986 |
| 1987 | 3.79 AT 04:32 PST ON FEB 01 | 3.38 ON FEB 01 | 0.019 ON OCT 28 * | 8 570 | 1987 |
| 1988 | 3.90 AT 21:23 PST ON DEC 30 | 3.67 ON DEC 31 | 0.039 ON SEP 10 | 14 300 | 1988 |
| 1989 | 4.77 AT 21:07 PST ON JAN 18 | 4.44 ON JAN 18 | 0.029 ON SEP 29 | 18 100 | 1989 |
| 1990 | 17.1 AT 11:29 PST ON NOV 24 * | 16.7 ON NOV 24 * | 0.049 ON SEP 30 | 33 000 | 1990 |
| | | * - EXTREME RECORDED FOR THE PERIOD OF RECORD | | 17 900 | MEAN |

NOBLE CREEK AT THE MOUTH - STATION NO. 08HA028

MONTHLY AND ANNUAL MEAN DISCHARGES IN CUBIC METRES PER SECOND FOR THE PERIOD OF RECORD

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | MEAN | YEAR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1971 | --- | --- | --- | 0.108 | 0.024 | 0.012 | 0.008 | 0.007 | 0.012 | --- | --- | --- | --- | 1971 |
| 1972 | --- | --- | --- | 0.078 | 0.033 | 0.012 | 0.012 | 0.009 | 0.019 | --- | --- | --- | --- | 1972 |
| MEAN | --- | --- | --- | 0.093 | 0.029 | 0.012 | 0.010 | 0.008 | 0.016 | --- | --- | --- | --- | MEAN |

LOCATION - LAT 48 32 20 N
LONG 123 21 47 W NATURAL FLOW

NOBLE CREEK AT THE MOUTH - STATION NO. 08HA028

ANNUAL EXTREMES OF DISCHARGE AND ANNUAL TOTAL DISCHARGE FOR THE PERIOD OF RECORD

| YEAR | MAXIMUM INSTANTANEOUS DISCHARGE ($m^3/s$) | MAXIMUM DAILY DISCHARGE ($m^3/s$) | MINIMUM DAILY DISCHARGE ($m^3/s$) | TOTAL DISCHARGE ($dam^3$) | YEAR |
|---|---|---|---|---|---|
| 1971 | --- | --- | 0.007 ON JUL 22 * | --- | 1971 |
| 1972 | --- | 0.204 ON APR 01 * | 0.007 ON JUN 07 | --- | 1972 |
| | | * - EXTREME RECORDED FOR THE PERIOD OF RECORD | | --- | MEAN |

PELKY SPRING NEAR SAANICHTON - STATION NO. 08HA007

MONTHLY AND ANNUAL MEAN DISCHARGES IN CUBIC METRES PER SECOND FOR THE PERIOD OF RECORD

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | MEAN | YEAR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1949 | --- | 0 | 0 | 0 | 0 | 0 | --- | --- | --- | --- | --- | --- | --- | 1949 |
| MEAN | --- | 0 | 0 | 0 | 0 | 0 | --- | --- | --- | --- | --- | --- | --- | MEAN |

LOCATION - LAT 48 35 25 N
LONG 123 23 15 W NATURAL FLOW

PELKY SPRING NEAR SAANICHTON - STATION NO. 08HA007

ANNUAL EXTREMES OF DISCHARGE AND ANNUAL TOTAL DISCHARGE FOR THE PERIOD OF RECORD

| YEAR | MAXIMUM INSTANTANEOUS DISCHARGE ($m^3/s$) | MAXIMUM DAILY DISCHARGE ($m^3/s$) | MINIMUM DAILY DISCHARGE ($m^3/s$) | TOTAL DISCHARGE ($dam^3$) | YEAR |
|---|---|---|---|---|---|
| 1949 | --- | --- | 0 ON JAN 09 * | --- | 1949 |
| | | * - EXTREME RECORDED FOR THE PERIOD OF RECORD | | --- | MEAN |

TOD CREEK BELOW PROSPECT LAKE - STATION NO. 08HA054

MONTHLY AND ANNUAL MEAN DISCHARGES IN CUBIC METRES PER SECOND FOR THE PERIOD OF RECORD

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | MEAN | YEAR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1982 | --- | --- | --- | 0.131 | 0.034 | 0 | 0.001 | 0.002 | 0.001 | --- | --- | --- | --- | 1982 |
| 1983 | --- | --- | --- | 0.151 | 0.033 | 0 | 0 | 0 | 0.003 | --- | --- | --- | --- | 1983 |
| 1984 | --- | --- | --- | 0.107 | 0.050 | 0.022 | 0.003 | 0.004 | 0.013 | --- | --- | --- | --- | 1984 |
| 1985 | --- | --- | --- | 0.050 | 0.023 | 0.006 | 0.002 | 0.011 | 0.007 | --- | --- | --- | --- | 1985 |
| 1986 | --- | --- | --- | 0.103 | 0.099 | 0.018 | 0.004 | 0.002 | 0 | --- | --- | --- | --- | 1986 |
| 1987 | --- | --- | --- | 0.077 | 0.031 | 0.001 | 0 | 0.002 | 0.001 | --- | --- | --- | --- | 1987 |
| 1988 | --- | --- | --- | 0.126 | 0.036 | 0.001 | 0.001 | 0 | 0 | --- | --- | --- | --- | 1988 |
| 1989 | --- | --- | --- | 0.283 | 0.008 | 0.001 | 0.003 | 0.009 | 0 | --- | --- | --- | --- | 1989 |
| 1990 | --- | --- | --- | 0.077 | 0.013 | 0.007 | 0.001 | 0.002 | 0.002 | --- | --- | --- | --- | 1990 |
| MEAN | --- | --- | --- | 0.145 | 0.036 | 0.006 | 0.002 | 0.004 | 0.003 | --- | --- | --- | --- | MEAN |

LOCATION - LAT 48 31 29 N DRAINAGE AREA, 8.55 km²
LONG 123 26 16 W NATURAL FLOW

TOD CREEK BELOW PROSPECT LAKE - STATION NO. 08HA054

ANNUAL EXTREMES OF DISCHARGE AND ANNUAL TOTAL DISCHARGE FOR THE PERIOD OF RECORD

| YEAR | MAXIMUM INSTANTANEOUS DISCHARGE ($m^3/s$) | MAXIMUM DAILY DISCHARGE ($m^3/s$) | MINIMUM DAILY DISCHARGE ($m^3/s$) | TOTAL DISCHARGE ($dam^3$) | YEAR |
|---|---|---|---|---|---|
| 1982 | --- | --- | 0 ON MAY 18 * | --- | 1982 |
| 1983 | --- | --- | 0 ON MAY 14 | --- | 1983 |
| 1984 | --- | --- | 0 ON JUL 21 | --- | 1984 |
| 1985 | --- | --- | 0 ON JUL 14 | --- | 1985 |
| 1986 | --- | --- | 0 ON AUG 11 | --- | 1986 |
| 1987 | --- | --- | 0 ON JUN 20 | --- | 1987 |
| 1988 | --- | --- | 0 ON JUN 25 | --- | 1988 |
| 1989 | --- | --- | 0 ON JUN 27 | --- | 1989 |
| 1990 | --- | --- | 0 ON JUL 14 | --- | 1990 |
| | | * - EXTREME RECORDED FOR THE PERIOD OF RECORD | | --- | MEAN |

PROSPECT LAKE IN SAANICH - STATION NO. 08HA053

MONTHLY MEAN WATER LEVELS IN METRES FOR THE PERIOD OF RECORD

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JULY | AUG | SEPT | OCT | NOV | DEC | MEAN | YEAR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1982 | | | | 1.626 | 1.501 | 1.428 | 1.362 | 1.259 | 1.184 | | | | | 1982 |
| 1983 | | | | 1.665 | 1.541 | 1.452 | 1.392 | 1.295 | 1.283 | | | | | 1983 |
| 1984 | | | | 1.675 | 1.680 | 1.656 | 1.585 | 1.460 | 1.359 | | | | | 1984 |
| 1985 | | | | 1.686 | 1.678 | 1.651 | 1.526 | 1.382 | 1.267 | | | | | 1985 |
| 1986 | | | | 1.642 | 1.566 | 1.532 | 1.432 | 1.309 | 1.203 | | | | | 1986 |
| 1987 | | | | 1.687 | 1.656 | 1.591 | 1.478 | 1.348 | 1.245 | | | | | 1987 |
| 1988 | | | | 1.728 | 1.553 | 1.526 | 1.439 | 1.320 | 1.243 | | | | | 1988 |
| 1989 | | | | 1.688 | 1.621 | 1.598 | 1.510 | 1.389 | 1.289 | | | | | 1989 |
| 1990 | | | | 1.467 | 1.537 | 1.562 | 1.493 | 1.359 | 1.307 | | | | | 1990 |
| MEAN | | | | 1.652 | 1.593 | 1.555 | 1.469 | 1.347 | 1.264 | | | | | MEAN |
| MAXIMUM | | | | 1.728 | 1.680 | 1.656 | 1.585 | 1.460 | 1.359 | | | | | MAXIMUM |
| MINIMUM | | | | 1.467 | 1.501 | 1.428 | 1.362 | 1.259 | 1.184 | | | | | MINIMUM |

# APPENDIX C

## Miscellaneous Stream Flow and Water Level Records

# LOW FLOW OBSERVATIONS JULY-SEPT 1992

STATION NAME: *SANDHILL CREEK* *below Pat Bay Highway*

REGIONAL REF NO: *1AHA025*

LOCATION NTS #: *92 B/5* LATITUDE: *48° 34' 52"* LONGITUDE: *123° 23' 48"*

WSC NO.: *na* NATURAL/REGULATED: *Natural*

REFERENCE TO PREVIOUS LOW FLOW DATA: *na*

| DATE JULY | FLOW l/s | CODE | DATE AUGUST | FLOW l/s | CODE | DATE SEPTEMBER | FLOW l/s | CODE |
|---|---|---|---|---|---|---|---|---|
| 01 | | | 01 | 5 | E | 01 | 6 | E |
| 02 | | | 02 | 7 | E | 02 | 6 | F |
| 03 | | | 03 | 11 | E | 03 | 7 | E |
| 04 | | | 04 | 10 | F | 04 | 11 | F |
| 05 | | | 05 | 6 | E | 05 | 9 | E |
| 06 | | | 06 | 5 | E | 06 | 7 | E |
| 07 | | | 07 | 8 | E | 07 | 6 | E |
| 08 | | | 08 | 13 | E | 08 | 5 | F |
| 09 | | | 09 | 17 | E | 09 | 7 | E |
| 10 | | | 10 | 12 | F | 10 | 8 | E |
| 11 | | | 11 | 9 | E | 11 | 7 | E |
| 12 | | | 12 | 7 | E | 12 | 6 | E |
| 13 | | | 13 | 6 | E | 13 | 5 | E |
| 14 | | | 14 | 5 | F | 14 | 7 | E |
| 15 | | | 15 | 4 | E | 15 | 11 | E |
| 16 | | | 16 | 4 | E | 16 | 10 | E |
| 17 | | | 17 | 4 | E | 17 | 9 | F |
| 18 | | | 18 | 3 | E | 18 | 8 | E |
| 19 | | | 19 | 3 | E | 19 | 7 | E |
| 20 | | | 20 | 3 | E | 20 | 7 | E |
| 21 | 41 | E | 21 | 3 | E | 21 | | |
| 22 | 33 | B | 22 | 6 | E | 22 | | |
| 23 | 23 | E | 23 | 11 | E | 23 | | |
| 24 | 17 | E | 24 | 9 | F | 24 | | |
| 25 | 14 | E | 25 | 7 | E | 25 | | |
| 26 | 12 | E | 26 | 5 | E | 26 | | |
| 27 | 9 | E | 27 | 4 | F | 27 | | |
| 28 | 9 | E | 28 | 4 | E | 28 | | |
| 29 | 7 | E | 29 | 3 | E | 29 | | |
| 30 | 6 | E | 30 | 4 | E | 30 | | |
| 31 | 6 | F | 31 | 6 | E | | | |

FLOW INDEX STATION: *08HA054 Tod Creek*

NOTE: *na*

CODES
A = STAGE DISCHARGE RELATIONSHIP
B = CURRENT METER MEASUREMENT
C = WEIR
D = BUCKET METHOD
E = ESTIMATED BASED ON FLOW INDEX STATION
F = FLUME
G = FLOW ESTIMATE FROM LOCAL OBSERVATION
T = FLOW LESS THAN 0.5 LITRES PER SECOND
Q = QUARTER POINT METHOD

ADDITIONAL DATA

| DATE | FLOW l/s | CODE |
|---|---|---|
| Oct-13 | 13 | B |
| | | |
| | | |
| | | |
| | | |

August Mean Daily Flow: *7 l/s*

| | |
|---|---|
| *MINIMUM FLOW* | *3 l/s* |
| *MIN. FLOW PERIOD* | *Aug 18-21* |

BRITISH COLUM

REGIONAL WATER MANAGEMENT — VANCOUVER ISLAND REGION

1005 Gold[illegible] Rd
Victoria, B.C.

# DAILY GAUGE HEIGHTS

Station Name Glen Lake Watershed Colwood Creek Location Lat. - 48° 26' 15" Long. - 123° 31' 06"

Daily Elevations or Gauge Heights in Feet for the Year 1979

| | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | 3.38 |
| 3 | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | 3.58 |
| 10 | | | | | | | | | | | | |
| 11 | | | | | | | | | | | 3.21 | |
| 12 | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | 5.00 |
| 17 | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | |
| 21 | | | | | | | | | | | 3.17 | |
| 22 | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | 5.17 |
| 24 | | | | | | | | | | 3.08 | | |
| 25 | | | | | | | | | | | 3.25 | |
| 26 | | | | | | | | | | | | |
| 27 | | | | | | | | | | | | |
| 28 | | | | | | | | | | 3.25 | | |
| 29 | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | 4.92 |
| 31 | | | | | | | | | | | | |

| Summary For the Year 1979 | | | | Computed By | Checked B |
|---|---|---|---|---|---|
| | Maximum daily | gauge height | ft at | on , | Date |
| | Minimum daily | gauge height | ft at | on | |

* Gauge installed by Mr. Roy Fordham on his property at lake edge. R.W.M.B. standard gauge installed on [illegible] obtained by phoning Mr. Fordham at 478-4902.

BRITISH COLUMBIA — MINISTRY OF ENVIRONMENT

REGIONAL WATER MANAGEMENT -- VANCOUVER ISLAND REGION

3009 Seimar Road
Victoria, B.C.

# DAILY GAUGE HEIGHTS

Station Name Glen Lake Watershed Colwood Creek Location Lat. - 48° 26' 15" Long. - 123° 31' 06" Stream

Daily Elevations or Gauge Heights in Feet for the Year 1980

| | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | 3.52 | | | | | | |
| 2 | | | 4.42 | | | | | | | | | |
| 3 | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | |
| 6 | 4.42 | | | 4.00 | | | | | | | | |
| 7 | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | 4.61 |
| 9 | | | 4.17 | | | | | | | | 3.78 | |
| 10 | | 4.42 | | | | 3.55 | | 3.13 | | | | |
| 11 | | | | | 3.58 | | | | | | | |
| 12 | | | | | | | | | | 3.30 | | |
| 13 | 4.75 | | | 3.92 | | | 3.30 | | | | | |
| 14 | | | | | | | | | 3.20 | | | 5.01 |
| 15 | | | | | | 3.44 | | | | | | |
| 16 | | | 4.58 | | | | | | | | 3.68 | |
| 17 | | 4.25 | | | | | | 3.10 | | | | |
| 18 | | | | | | | | | | | | |
| 19 | | | | | | | | | | 3.31 | | |
| 20 | 4.83 | | | | | | 3.23 | | | | | |
| 21 | | | | | | | | | 3.24 | | | 4.91 |
| 22 | | | | | | | | | | | | |
| 23 | | | 4.33 | | | | | | | | 4.62 | |
| 24 | | 4.08 | | | | | | 3.15 | | | | |
| 25 | | | | | 3.52 | | | | | | | |
| 26 | | | | | | | | | | 3.22 | | |
| 27 | 4.33 | | | | | 3.33 | 3.20 | | | | | |
| 28 | | | | | | | | | 3.24 | | | 5.20 |
| 29 | | | | | | 3.33 | | | | | | |
| 30 | | | 4.17 | | | | | | | | 4.90 | |
| 31 | | | | | | | | 3.10 | | | | |

| Summary For the Year 1980 | | | | | | Computed By | Check |
|---|---|---|---|---|---|---|---|
| | Maximum daily | gauge height | 5.20 | ft at | on | Dec. 28 | Date |
| | Minimum daily | gauge height | 3.10 | ft at | on | Aug. 31 | |

REGIONAL WATER MANAGEMENT -VANCOUVER ISLAND REGION

2009 Selma Road
Victoria, B.C.

DAILY GAUGE HEIGHTS

Station Name Glen Lake Watershed Colwood Creek Location Lat. - 48° 26' 15" Long. - 123° 31' 06

Daily Elevations of Gauge Heights in Feet for the Year 19 81

| | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | 4.00 | 4.85 | | | | | | | | 3.65 | |
| 2 | | | | | 4.29 | | | | | | | |
| 3 | 5.00 | | | | | | | | | | | |
| 4 | | | | 4.00 | | | | | | | | 4.26 |
| 5 | | | | | | 3.45 | | | | | | |
| 6 | | 3.90 | 4.25 | | | | | | | | | |
| 7 | | | | | 3.90 | | | | | | | |
| 8 | 4.72 | | | | | | | 3.15 | | 3.20 | 3.55 | |
| 9 | | | | 4.20 | | | 3.21 | | | | | |
| 10 | | | | | | | | | 3.19 | | | 4.88 |
| 11 | | 4.08 | | | | 3.48 | | | | | | |
| 12 | | | 4.00 | | | | | | | | 3.80 | |
| 13 | | | | | 3.91 | | | 3.00 | | | | |
| 14 | 4.25 | | | | | | | | | 3.23 | | |
| 15 | | | | 4.00 | | | | | | | | |
| 16 | | | | | | | 3.20 | | 3.09 | | | 4.79 |
| 17 | | | | | | 3.50 | | | | | | |
| 18 | | | 3.88 | | | | | | | | 4.44 | |
| 19 | | 4.90 | | | | | | 3.10 | | | | |
| 20 | | | | | | | | | | | | |
| 21 | 4.10 | | | | | | | | | 3.20 | | |
| 22 | | | | 3.90 | | | | | | | | |
| 23 | | | | | | | | | 3.28 | | | 4.42 |
| 24 | | | | | | | | | | | | |
| 25 | | | 3.81 | | | 3.28 | | | | | 4.22 | |
| 26 | | | | | | | | 3.15 | | | | |
| 27 | | | | | 3.52 | | | | | | | |
| 28 | | | | | | | | | | | | |
| 29 | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | |
| 31 | | | | | | | | | | | | |

| Summary For the Year 1981 | | | | | Computed By | Checked By |
|---|---|---|---|---|---|---|
| | Maximum daily | gauge height 5.00 ft at | on Jan. 4 | | Date | |
| | Minimum daily | gauge height 3.00 ft at | on Aug. 17 | | | |

Comments:

BRITISH COLUMBIA

MINISTRY OF ENVIRONMENT

REGIONAL WATER MANAGEMENT - VANCOUVER ISLAND REGION

# DAILY GAUGE HEIGHTS

ation Name Elsie Lake Watershed Colwood Creek Location N48° 26' 15" W123° 21' 05" Station No.

Daily Elevations or Gauge Heights in Feet for the Year 1982

| | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | 2.85 | 3.16 | | | |
| 2 | | | | | 3.65 | | | | | | | |
| 3 | 4.28 | | | | | | | | | | | |
| 4 | | | | 3.88 | | | 3.22 | | | | | 4.58 |
| 5 | | | | | | 3.86 | | | 3.18 | | | |
| 6 | | | | | | | | | | | | |
| 7 | | 4.94 | 4.29 | | | | | | | | | |
| 8 | | | | | | | | 2.65 | | | | |
| 9 | | | | | 3.56 | | | | | | | |
| 10 | 4.32 | | | | | | 3.20 | | | 3.20 | | |
| 11 | | | | 3.78 | | | | | | | | 4.57 |
| 12 | | | | | | 3.18 | | | 3.20 | | | |
| 13 | | | | | | | | | | | | |
| 14 | | 4.79 | 4.20 | | | | | | | | 3.32 | |
| 15 | | | | | | | | 3.30 | | | | |
| 16 | | | | | 3.48 | | | | | | | |
| 17 | 4.81 | | | | | | | | | 3.28 | | |
| 18 | | | | 3.83 | | | 3.20 | | | | | |
| 19 | | | | | | | | | 3.19 | | | 4.80 |
| 20 | | | | | | 3.20 | | | | | 3.66 | |
| 21 | | 4.88 | 4.00 | | | | | | | | | |
| 22 | | | | | | | | 3.18 | | | | |
| 23 | | | | | 3.35 | | | | | 3.37 | | |
| 24 | 5.32 | | | | | | | | | | | |
| 25 | | | | 3.69 | | | | | | | | 4.59 |
| 26 | | | | | | | 3.20 | | 3.19 | | | |
| 27 | 5.25 | | | | | 3.20 | | | | | 3.69 | |
| 28 | | 4.73 | 3.90 | | | | | | | | | |
| 29 | | | | | | | | | | | | |
| 30 | | | | | 3.30 | | | | | | | |
| 31 | 5.10 | | | | | | | | | 36.0 | | |

| Summary For the Year 1982 | Maximum daily gauge height ft at on | Computed By | Checked By |
|---|---|---|---|
| | Minimum daily gauge height ft at on | Date | |

Comments: Special Gauge Heights.

# APPENDIX D

## Fish Resources and Streams

Fisheries Concerns
Saanich Peninsula Water Allocation Plan

Apr. 22, 1994



| Source | W.A.Plan | Fish Concern | Tributary to | Watershed |
|---|---|---|---|---|
| Airport Creek | SPWAP | Probably Stickleback, Stream Access Limited | Ocean | Airport Creek |
| Allan Spring | SPWAP | Probably Stickleback, Stream Access Limited | | Airport Creek |
| Ardmore Spring No. One | SPWAP | Probably Stickleback, Stream Access Limited | | Airport Creek |
| Bawden Springs | SPWAP | Probably Stickleback, Stream Access Limited | | Airport Creek |
| Collins Spring | SPWAP | Probably Stickleback, Stream Access Limited | | Airport Creek |
| Griffin Spring | SPWAP | Probably Stickleback, Stream Access Limited | Ground | Airport Creek |
| Maquinna Springs | SPWAP | Stream Access Limited | | Airport Creek |
| Montrose Spring | SPWAP | Probably Stickleback, Stream Access Limited | | Airport Creek |
| Woodcote Spring | SPWAP | Stream Access Limited | | Airport Creek |
| Burnhan brook | SPWAP | Cutthroat | Cordova Bay | Burnhan Brook |
| Busko Spring | SPWAP | Cutthroat | Burnhan Brook | Burnhan Brook |
| North Burnhan Brook | SPWAP | Cutthroat | Cordova Bay | Burnhan Brook |
| South Burnhan Brook | SPWAP | Cutthroat | Cordova Bay | Burnhan Brook |
| Chalet Creek | SPWAP | | Ocean | Chalet Creek |
| Moses Brook | SPWAP | | Chalet Creek | Chalet Creek |
| Moses Springs | SPWAP | | Moses Brook | Chalet Creek |
| Pleasance Brook | SPWAP | | | Chalet Creek |
| Pleasance Spring | SPWAP | | | Chalet Creek |
| Bear Hill Spring | SPWAP | | Ground | Colquitz River |
| Beaver Lake | SPWAP | Bass, Cutthroat, Rainbow, Pumpkinseed, Stocked | Colquitz River | Colquitz River |
| Beckwith Pond | SPWAP | | Blenkinsop Lake | Colquitz River |
| Blenkinsop Creek | SPWAP | Stickleback, Resident Cutthroat | Colquitz River | Colquitz River |
| Blenkinsop Lake | SPWAP | Cutthroat, Pumpkinseed, Brown Bullhead, Scalpins | Blenkinsop Creek | Colquitz River |
| Bolton Swamp | SPWAP | | Colquitz River | Colquitz River |
| Burke Spring | SPWAP | | | Colquitz River |
| Burton Brook | SPWAP | | Bolton Swamp | Colquitz River |
| Chambers Creek | SPWAP | | Ground | Colquitz River |
| Christmas Hill | SPWAP | | | Colquitz River |
| Colquitz River | SPWAP | Coho, Cutthroat, Pumpkinseed, Stickleback | Ocean | Colquitz River |
| Cub Springs | SPWAP | | Whiskey Ditch | Colquitz River |
| Durrel Creek | SPWAP | Coho, Cutthroat, Pumpkinseed, Stickleback | Colquitz River | Colquitz River |
| Elk Lake | SPWAP | Bass, Cutthroat, Rainbow, Stickleback, Stocked | Colquitz River | Colquitz River |
| Erlander | SPWAP | | Colquitz River | Colquitz River |
| Estate Brook | SPWAP | | Elk Lake | Colquitz River |
| Estate Springs | SPWAP | | Estate Brook | Colquitz River |
| Fairburn springs | SPWAP | | | Colquitz River |
| Furess Creek | SPWAP | | Colquitz River | Colquitz River |
| Gabo Creek | SPWAP | Pumpkinseed | Furess Creek | Colquitz River |
| Goward Spring Creek | SPWAP | Cutthroat | Colquitz River | Colquitz River |
| Green Spring | SPWAP | | Ground | Colquitz river |
| Herrington Spring No. One | SPWAP | | O'Donnell Creek | Colquitz River |
| Joann Brook | SPWAP | | | Colquitz River |
| Lawrence Spring | SPWAP | | Ground | Colquitz river |
| Mahta Brook | SPWAP | | Colquitz River | Colquitz River |
| Milks Spring | SPWAP | | Blenkinsop Creek | Colquitz River |
| Nordwall Spring | SPWAP | | Unamed Brook | Colquitz river |
| O'Donnel Creek | SPWAP | Important Trout Spawning Creek, Cutthroat, Rainbow | Elk Lake | Colquitz River |
| Outerbridge Swamp | SPWAP | | Ditch | Colquitz river |
| Porters Creek | SPWAP | | Colquitz River | Colquitz River |
| Puth Spring | SPWAP | | Ground | Colquitz River |
| Swan Lake | SPWAP | Cutthroat, Pumpkinseed, Stickleback | Swan Lake Creek | Colquitz River |
| Whiskey Ditch | SPWAP | | Elk Lake | Colquitz River |
| Colwood Creek | SPWAP | Cutthroat, Stickleback, Searun At Mouth | Esquimalt Lagoon | Colwood Creek |

Fisheries Concerns
Saanich Peninsula Water Allocation Plan

Apr. 22, 1994



| Source | W.A.Plan | Fish Concern | Tributary to | Watershed |
|---|---|---|---|---|
| Colwood Lake | SPWAP | Cutthroat, Stickleback, Rainbow, Stocked | Colwood Creek | Colwood Creek |
| Glen Lake | SPWAP | Cutthroat, Rainbow, Bass, Pumpkinseed, Stocked | Colwood Creek | Colwood Creek |
| Peat Swamp | SPWAP | | Colwood Creek | Colwood Creek |
| Craigflower Creek | SPWAP | Coho, Cutthroat | | Craigflower Creek |
| Eagles Lake | SPWAP | | Munn Creek | Craigflower Creek |
| Fork Lake | SPWAP | Coho, Cutthroat, Stocked for fishing | | Craigflower Creek |
| Harris Creek | SPWAP | | Munns Creek | Craigflower Creek |
| Mckenzie Lake | SPWAP | Coho, Cutthroat, Brownbull, Stickleback, Stocked | | Craigflower Creek |
| Munn Creek | SPWAP | | Pike Lake | Craigflower Creek |
| Thetis Lake | SPWAP | Coho, Cutthroat, Bass, Rainbow, Stocked | | Craigflower Creek |
| Thomas Brook | SPWAP | | Ocean | Craigflower Creek |
| Bannockburn Brook | SPWAP | | Hagan Creek | Hagan Creek |
| Brentwood Spring | SPWAP | Resident Cutthroat Trout, Prev. Coho Enhancement | | Hagan Creek |
| Charles Springs | SPWAP | | | Hagan Creek |
| Daly Spring | SPWAP | Resident Cutthroat Trout, Prev. Coho Enhancement | | Hagan Creek |
| Douglas Springs | SPWAP | Resident Cutthroat Trout, Prev. Coho Enhancement | | Hagan Creek |
| Farley Creek | SPWAP | Resident Cutthroat Trout, Prev. Coho Enhancement | Hagan Creek | Hagan Creek |
| Graham Creek | SPWAP | Resident Cutthroat Trout, Prev. Coho Enhancement | Hagan Creek | Hagan Creek |
| Hagan Creek | SPWAP | Resident Cutthroat Trout, Prev. Coho Enhancement | Ocean | Hagan Creek |
| Harrop Pond | SPWAP | | Ground | Hagan Creek |
| Hollridge Pond | SPWAP | Resident Cutthroat Trout, Prev. Coho Enhancement | Hagan Creek | Hagan Creek |
| Laitinen Swamp | SPWAP | Resident Cutthroat Trout, Prev. Coho Enhancement | | Hagan Creek |
| Maher Springs | SPWAP | | Ground | Hagan Creek |
| Macklin Brook | SPWAP | Resident Cutthroat Trout, Prev. Coho Enhancement | Road Ditch | Hagan Creek |
| Mikosch Springs | SPWAP | | | Hagan Creek |
| Niblick Swamp | SPWAP | | Graham Creek | Hagan Creek |
| Peel Brook | SPWAP | Resident Cutthroat Trout, Prev. Coho Enhancement | Hagan Creek | Hagan Creek |
| Rainsford Spring | SPWAP | | Ground | Hagan Creek |
| Spence Spring | SPWAP | Resident Cutthroat Trout, Prev. Coho Enhancement | | Hagan Creek |
| Stephan Creek | SPWAP | Resident Cutthroat Trout, Prev. Coho Enhancement | Hagan Creek | Hagan Creek |
| Thomson Brook | SPWAP | | Hagan Creek | Hagan Creek |
| Unpocla Swamp | SPWAP | Resident Cutthroat Trout, Prev. Coho Enhancement | Bannockburn Brook | Hagan Creek |
| Verhagen Spring | SPWAP | Resident Cutthroat Trout, Prev. Coho Enhancement | Graham Creek | Hagan Creek |
| Wallace Ditch | SPWAP | Resident Cutthroat Trout, Prev. Coho Enhancement | | Hagan Creek |
| Waller | SPWAP | | Ground | Hagan Creek |
| West Brook | SPWAP | Resident Cutthroat Trout, Prev. Coho Enhancement | Hagan Creek | Hagan Creek |
| Young Spring | SPWAP | Resident Cutthroat Trout, Prev. Coho Enhancement | | Hagan Creek |
| Corcoran Swamp | SPWAP | | Barsman Brook | Millstream |
| Barsman brook | SPWAP | Cutthroat Trout | Millstream | Millstream |
| Florence Lake | SPWAP | Cutthroat, Rainbow, Scalpin, Sunfish, Stocked | Priest Creek | Millstream |
| Gardner Creek | SPWAP | Cutthroat Trout | Millstream | Millstream |
| Hazlitt Creek | SPWAP | | Second Lake | Millstream |
| Millstream | SPWAP | Res Cutthroat, Formerly Small Coho Run At Mouth | Ocean | Millstream |
| Mitchell Lake | SPWAP | Cutthroat Trout | Millstream | Millstream |
| Second Lake | SPWAP | Cutthroat, Historic Rainbow | Millstream | Millstream |
| Tennick Lake | SPWAP | Cutthroat Trout | Millstream | Millstream |
| Third Lake | SPWAP | Cutthroat Trout | Millstream | Millstream |
| ?? Swamp | SPWAP | | Millstream | Millstream |
| Brooks Spring | SPWAP | | Noble Creek | Noble Creek |
| Chew Springs | SPWAP | | McHugh Ditch | Noble Creek |
| David Springs No Two | SPWAP | | McHugh Ditch | Noble Creek |
| David Springs No. One | SPWAP | | McHugh Ditch | Noble Creek |
| Dean Brook | SPWAP | | | Noble Creek |

Fisheries Concerns
Saanich Peninsula Water Allocation Plan

Apr. 22, 1994 

| Source | W.A.Plan | Fish Concern | Tributary to | Watershed |
|---|---|---|---|---|
| Hatch Springs | SPWAP | | | Noble Creek |
| Henry Spring | SPWAP | | | Noble Creek |
| Johnina Spring | SPWAP | | | Noble Creek |
| Knox Brook | SPWAP | | | Noble Creek |
| Lavern Brook | SPWAP | | | Noble Creek |
| Mah Brook | SPWAP | | McHugh Ditch | Noble Creek |
| Mah Spring | SPWAP | | | Noble Creek |
| McHugh Ditch | SPWAP | Cutthroat Trout | | Noble Creek |
| Mixon Spring | SPWAP | | | Noble Creek |
| Noble Creek | SPWAP | Cutthroat Trout | Ocean | Noble Creek |
| Oud Spring | SPWAP | | | Noble Creek |
| Robbins Swamp | SPWAP | | McHugh Ditch | Noble Creek |
| Sayward Spring | SPWAP | | | Noble Creek |
| Stokes Spring | SPWAP | | McHugh Ditch | Noble Creek |
| Wells Swamp | SPWAP | | | Noble Creek |
| Albert Swamp | SPWAP | | | Other |
| Amos Springs | SPWAP | | | Other |
| Bee Creek | SPWAP | | Esquimalt Lagoon | Other |
| Benes Creek | SPWAP | | | Other |
| Bowker Creek | SPWAP | Stickleback, Salmon At Mouth | Ocean | Other |
| Butchart Creek | SPWAP | | Tod Inlet | Other |
| Chris Spring | SPWAP | | Ocean | Other |
| Clay Springs | SPWAP | | | Other |
| Colville Spring | SPWAP | | | Other |
| Dianne Ditch | SPWAP | Fish Habitat Impacted By Devel. Needs Assessment | Ocean | Other |
| Dominion Brook | SPWAP | | Bazan Bay | Other |
| Elgin Spring | SPWAP | | | Other |
| Fea Creek | SPWAP | | Ocean | Other |
| Finlayson Springs | SPWAP | | | Other |
| Galey Brook | SPWAP | Fish Habitat Impacted By Devel. Needs Assessment | Ocean | Other |
| Gardin Creek | SPWAP | | Cordova Bay | Other |
| Glamorgan Spring | SPWAP | | | Other |
| Hagar Springs | SPWAP | High Fisheries Opportunity, Needs Assessment | Cadboro Bay | Other |
| Hall Spring | SPWAP | | | Other |
| Harrison Spring | SPWAP | | | Other |
| Hobbs Creek | SPWAP | High Fisheries Opportunity, Needs Assessment | Cadboro Bay | Other |
| Holland Spring | SPWAP | | | Other |
| Hoops Spring | SPWAP | | | Other |
| Hudson Brook | SPWAP | | | Other |
| Island View Springs | SPWAP | | Ocean | Other |
| Jack Swamp | SPWAP | | | Other |
| Johns Spring | SPWAP | | | Other |
| Kingsberry Pond | SPWAP | High Fisheries Opportunity, Needs Assessment | Roadside Ditches | Other |
| Lagoon Brook | SPWAP | | Esquimalt Lagoon | Other |
| Lamont Springs | SPWAP | | | Other |
| Mackay Spring | SPWAP | High Fisheries Opportunity, Needs Assessment | Hobbs Creek | Other |
| Mason Spring | SPWAP | | Cordova Bay | Other |
| May Spring | SPWAP | | | Other |
| McMillian Brook | SPWAP | | | Other |
| Meadlands Spring | SPWAP | Cutthroat, Coho, Chum | Sandowny Brook | Other |
| Mill Rd. Ditch | SPWAP | | | Other |
| Miller Brook | SPWAP | | Esquimalt Lagoon | Other |
| Montfort Spring | SPWAP | | Ocean | Other |

Fisheries Concerns
Saanich Peninsula Water Allocation Plan

Apr. 22, 1994



| Source | W.A.Plan | Fish Concern | Tributary to | Watershed |
|---|---|---|---|---|
| Ravenshill Ponds | SPWAP | | Maltby Lake | Tod Creek |
| Anderson Brook | SPWAP | | Tod Creek | Tod Creek |
| Anderson Spring | SPWAP | | Anderson Brook | Tod Creek |
| Andrassy Brook | SPWAP | | Tod Creek | Tod Creek |
| Bacon Brook | SPWAP | | Tod Creek | Tod Creek |
| Bartlett Spring | SPWAP | | | Tod Creek |
| Bennet Spring | SPWAP | | | Tod Creek |
| Bleathman Creek | SPWAP | | Prospect Lake | Tod Creek |
| Bonnel Spring | SPWAP | | Unnamed Creek | Tod Creek |
| Chennault Spring | SPWAP | | Irrigation Pond | Tod Creek |
| Daisy Brook | SPWAP | | Tod Creek | Tod Creek |
| Durrance Creek | SPWAP | Resident Cutthroat, Coho | | Tod Creek |
| Durrance Lake | SPWAP | Cutthroat, Rainbow, Bass, Pumpkinseed, Stocked | | Tod Creek |
| Foden Pond No. One | SPWAP | | Foden Pond No. Two | Tod Creek |
| Foden Pond No. Three | SPWAP | | Maltby Lake | Tod Creek |
| Foden Pond No. Two | SPWAP | | Foden Pond No. Three | Tod Creek |
| Gibson Brook | SPWAP | | Travers Creek | Tod Creek |
| Hartley Pond | SPWAP | | Travers Creek | Tod Creek |
| Holt Creek | SPWAP | | Tod Creek | Tod Creek |
| Hopkins Spring | SPWAP | | | Tod Creek |
| Kathgar Brook | SPWAP | | Sparton Brook | Tod Creek |
| Kerry Brook | SPWAP | | Ground | Tod Creek |
| Killarny Lake | SPWAP | | | Tod Creek |
| Llewellyn Spring | SPWAP | | Wray Creek | Tod Creek |
| Lohr Spring | SPWAP | Coho Stocking, Res Cutthroat, Rainbow, Pumpkinseed | | Tod Creek |
| Maltby Lake | SPWAP | Cutthroat, Stickleback, Pumpkinseed | | Tod Creek |
| Meadow Brook Spring | SPWAP | | Travers Creek | Tod Creek |
| Mutter Brook | SPWAP | | Prospect Lake | Tod Creek |
| Prospect Lake | SPWAP | Res Cutthroat, Rainbow, Pumpkinseed, Bass, Stocked | | Tod Creek |
| Quarry Lake | SPWAP | | Tod Creek | Tod Creek |
| Shortt Spring | SPWAP | | Ground | Tod Creek |
| Sparton Brook | SPWAP | | Tod Creek | Tod Creek |
| Spotts Spring | SPWAP | | | Tod Creek |
| Storrs Creek | SPWAP | | Tod Creek | Tod Creek |
| Swan Spring | SPWAP | | | Tod Creek |
| Tod Creek | SPWAP | Coho Stocking, Res Cutthroat, Pumpkinseed, Rainbow | Ocean | Tod Creek |
| Trav Spring | SPWAP | | Travers Creek | Tod Creek |
| Travers Creek | SPWAP | Trout Spawning, Rainbow, Cutthroat | Prodpect Lake | Tod Creek |
| Trevalac Brook | SPWAP | | Maltby Lake | Tod Creek |
| Trevlac Pond | SPWAP | | Maltby Lake | Tod Creek |
| Tvelta Pond | SPWAP | | Tod Creek | Tod Creek |
| Wray Creek | SPWAP | | Tod Creek | Tod Creek |

# APPENDIX E

Water Licenses

The following abbreviations are used in this section.

**PURPOSE**

**WWK** -Waterworks
**IRR** -Irrigation
**STONP** -Storage Non-Power
**PROCE** -Industrial Processing
**PONDS** -Industrial Ponds
**BOTTL** -Industrial Bottle Sales
**IFROS** -Industrial Frost Protection
**DOM** -Domestic
**LDIMP** -Land Improvement
**CONST** -Conservation Stored Water
**COOLG** -Industrial Cooling
**WTRNG** -Industrial Watering
**ISW** -Industrial Stock Watering
**CONWK** -Conservation Construction

**UNITS**

**GD** -Gallons per day (maximum day)
**AF** -Acre feet
**TF** -Total Flow (Authorizes works in stream only - no diversion)

| LICENCE NUMBER | FILE NUMBER | PURPOSE | SOURCE NAME | QUANTITY/UNIT |
|---|---|---|---|---|
| F070372 | 0216214 | BOTTL | Trav Spring | 500.0 GD |
| C072627 | 1001105 | BOTTL | Waller Springs | 9000.0 GD |
| | | | Total | 9,500.0 GD |
| F012651 | 0155512 | COOLG | Valleyview spring | 19,000.0 GD |
| | | | Total | 19,000.0 GD |
| C060666 | 0355901 | CONST | Gibson Brook | 2.0 AF |
| C101063 | 1001273 | CONST | Outerbridge Swamp | 2.0 AF |
| C042500 | 0317867 | CONST | Ravenshill Pond | 7.0 AF |
| C106041 | 0310139 | CONST | Trevlac Brook | 40.0 AF |
| | | | Total | 51.0 AF |
| C072279 | 1001120 | CONWK | Craigflower Creek | 0.0 TF |
| C064092 | 1000682 | CONWK | Reay Creek | 3.0 AF |
| | | | Total | 3.0 AF |
| C036181 | 0069566 | DOM | Amos Spring | 500.0 GD |
| F019939 | 0244489 | DOM | Amos Spring | 500.0 GD |
| F017954 | 0244490 | DOM | Amos Spring | 500.0 GD |
| C036182 | 0290867 | DOM | Amos Spring | 500.0 GD |
| F003352 | 0011662 | DOM | Anderson Spring | 500.0 GD |
| F045510 | 0264353 | DOM | Anderson Spring | 500.0 GD |
| F005425 | 0265285 | DOM | Anderson Spring | 1,000.0 GD |
| C047010 | 0329229 | DOM | Bacon Brook | 150.0 GD |
| F014453 | 0143410 | DOM | Bawden Spring | 500.0 GD |
| C031763 | 0270391 | DOM | Bear Hill Spring | 1,000.0 GD |
| C051257 | 0341225 | DOM | Bears Spring | 2,000.0 GD |
| F011024 | 0129003 | DOM | Bee Creek | 1,000.0 GD |
| C030171 | 0262029 | DOM | Bennett Spring | 1,000.0 GD |
| F060615 | 0235985 | DOM | Bennett Spring #2 | 500.0 GD |
| C054617 | 0355874 | DOM | Bleathman Creek | 500.0 GD |
| C047890 | 0330618 | DOM | Bonnell Spring | 500.0 GD |
| F007416 | 0072029 | DOM | Chalet Creek | 1,000.0 GD |
| F017858 | 0223505 | DOM | Charles Spring | 1,000.0 GD |

| LICENCE NUMBER | FILE NUMBER | PURPOSE | SOURCE NAME | QUANTITY/UNIT |
|---|---|---|---|---|
| C050524 | 0341959 | DOM | Chennault Spring | 1,500.0 GD |
| C107353 | 0144395 | DOM | Chris Spring | 500.0 GD |
| F011503 | 0144434 | DOM | Chris Spring | 500.0 GD |
| F014855 | 0152565 | DOM | Chris Spring | 500.0 GD |
| F048235 | 0316262 | DOM | Chris Spring | 500.0 GD |
| F014431 | 0153358 | DOM | Collins Spring | 500.0 GD |
| F017535 | 0140083 | DOM | Colquitz River | 500.0 GD |
| F004472 | 0241167 | DOM | Colville Spring | 1,000.0 GD |
| C048192 | 0340041 | DOM | Daly Spring | 1,000.0 GD |
| F012816 | 0078189 | DOM | Dean Brook | 2,000.0 GD |
| F016902 | 0078189 | DOM | Dean Brook | 2,000.0 GD |
| F018996 | 0263070 | DOM | Douglas Spring | 1,000.0 GD |
| F052867 | 0316461 | DOM | Douglas Spring | 1,000.0 GD |
| C069466 | 0341879 | DOM | Durrell Creek | 50.0 GD |
| C050894 | 0342027 | DOM | Eagles Lake | 500.0 GD |
| C051286 | 0342748 | DOM | Eagles Lake | 500.0 GD |
| C061285 | 1000150 | DOM | Eagles Lake | 500.0 GD |
| F017195 | 0083501 | DOM | Elgin Spring | 250.0 GD |
| F017195 | 0083501 | DOM | Elgin Spring | 250.0 GD |
| C055525 | 0366322 | DOM | Farley Creek | 500.0 GD |
| F004988 | 0045735 | DOM | Finlayson Spring | 500.0 GD |
| F021008 | 0263374 | DOM | Finlayson Spring | 500.0 GD |
| F050350 | 0281411 | DOM | Finlayson Spring | 500.0 GD |
| F021009 | 0290195 | DOM | Finlayson Spring | 500.0 GD |
| C043285 | 0322824 | DOM | Florence Lake | 500.0 GD |
| C043286 | 0322825 | DOM | Florence Lake | 500.0 GD |
| C043287 | 0322826 | DOM | Florence Lake | 500.0 GD |
| C043388 | 0322827 | DOM | Florence Lake | 500.0 GD |
| C043389 | 0322829 | DOM | Florence Lake | 500.0 GD |
| C043288 | 0322834 | DOM | Florence Lake | 500.0 GD |
| C043289 | 0322835 | DOM | Florence Lake | 500.0 GD |
| C043290 | 0322836 | DOM | Florence Lake | 500.0 GD |

| LICENCE NUMBER | FILE NUMBER | PURPOSE | SOURCE NAME | QUANTITY/UNIT |
|---|---|---|---|---|
| C043291 | 0322837 | DOM | Florence Lake | 500.0 GD |
| C043292 | 0322838 | DOM | Florence Lake | 500.0 GD |
| C058481 | 0369977 | DOM | Foden Pond #1 | 500.0 GD |
| C058484 | 0369977 | DOM | Foden Pond #1 | 500.0 GD |
| C046273 | 0329351 | DOM | Fork Lake | 500.0 GD |
| C065705 | 1000695 | DOM | Fork Lake | 500.0 GD |
| C101065 | 1001195 | DOM | Fork Lake | 500.0 GD |
| C101084 | 1001338 | DOM | Fork Lake | 500.0 GD |
| C101159 | 1001379 | DOM | Fork Lake | 500.0 GD |
| C101157 | 1001380 | DOM | Fork Lake | 500.0 GD |
| F005919 | 0017192 | DOM | Glamorgan Spring | 5,000.0 GD |
| F018687 | 0017576 | DOM | Graham Creek | 500.0 GD |
| F008375 | 0076244 | DOM | Hagan Creek | 2,000.0 GD |
| F049887 | 0264061 | DOM | Hall Spring | 500.0 GD |
| F013415 | 0068395 | DOM | Harrison Spring | 1,000.0 GD |
| F013416 | 0068395 | DOM | Harrison Spring | 1,000.0 GD |
| C054411 | 0355546 | DOM | Hartley Pond | 600.0 GD |
| C104535 | 0330749 | DOM | Hatch Spring | 500.0 GD |
| F007898 | 0072178 | DOM | Hatch Springs | 300.0 GD |
| C055997 | 0366947 | DOM | Hazlitt Creek | 500.0 GD |
| F017711 | 0218965 | DOM | Henry Spring | 1,000.0 GD |
| F009411 | 0105547 | DOM | Holland Spring | 2,000.0 GD |
| C055117 | 0355797 | DOM | Hollyridge Pond | 100.0 GD |
| C057498 | 0367723 | DOM | Holt Creek | 100.0 GD |
| F008660 | 0111361 | DOM | Hoops Spring | 200.0 GD |
| F020075 | 0258127 | DOM | Hopkins Spring | 500.0 GD |
| F005919 | 0017192 | DOM | John Spring | 2,500.0 GD |
| F019605 | 0251606 | DOM | Kennel Brook | 1,000.0 GD |
| C049358 | 0328820 | DOM | Kennel Brook | 500.0 GD |
| C058649 | 0368852 | DOM | Kerry Brook | 500.0 GD |
| F016901 | 0078843 | DOM | Knox Brook | 500.0 GD |
| C053416 | 0364414 | DOM | Laitinen Swamp | 200.0 GD |

| LICENCE NUMBER | FILE NUMBER | PURPOSE | SOURCE NAME | QUANTITY/UNIT |
|---|---|---|---|---|
| C029379 | 0254708 | DOM | Llewellyn Spring | 1,000.0 GD |
| C061351 | 1000241 | DOM | Llewellyn Spring | 600.0 GD |
| F019162 | 0242566 | DOM | Lohr Spring | 1,000.0 GD |
| C045296 | 0328397 | DOM | Macklin Brook | 100.0 GD |
| F016672 | 0208230 | DOM | Mah Springs | 500.0 GD |
| C050339 | 0195024 | DOM | Maquinna Spring | 500.0 GD |
| F039427 | 0067722 | DOM | Mason Spring | 2,500.0 GD |
| F009331 | 0088799 | DOM | May Spring | 1,000.0 GD |
| F014455 | 0148086 | DOM | May Spring | 1,000.0 GD |
| C020295 | 0189479 | DOM | McHugh Ditch | 500.0 GD |
| C065808 | 1000965 | DOM | McKenzie Lake | 500.0 GD |
| F016901 | 0078843 | DOM | McMillan Brook | 250.0 GD |
| C105595 | 0364822 | DOM | Meadlands Spring | 2,500.0 GD |
| C017097 | 0158938 | DOM | Mill Stream | 1,000.0 GD |
| F016740 | 0167949 | DOM | Mill Stream | 1,000.0 GD |
| F015779 | 0187523 | DOM | Mill Stream | 1,000.0 GD |
| C024311 | 0219603 | DOM | Mill Stream | 1,000.0 GD |
| C029247 | 0256933 | DOM | Mill Stream | 1,000.0 GD |
| C025721 | 0229211 | DOM | Mitchell Lake | 2,000.0 GD |
| F020429 | 0180562 | DOM | Montfort Springs | 1,500.0 GD |
| F016515 | 0194996 | DOM | Montrose Spring | 500.0 GD |
| F011434 | 0118608 | DOM | Moses Spring | 250.0 GD |
| F015455 | 0155073 | DOM | Moses Spring | 250.0 GD |
| F004284 | 0265279 | DOM | Moses Spring | 1,000.0 GD |
| C040178 | 0309828 | DOM | Munn Creek | 500.0 GD |
| C059093 | 0367756 | DOM | Munn Creek | 100.0 GD |
| C034491 | 0281918 | DOM | Mutter Brook | 500.0 GD |
| F020029 | 0217718 | DOM | Nixon Spring | 250.0 GD |
| F019168 | 0245723 | DOM | Noble Creek | 1,000.0 GD |
| F020029 | 0217718 | DOM | Oud Spring | 250.0 GD |
| F039378 | 0210527 | DOM | Page Spring | 500.0 GD |
| C024159 | 0218981 | DOM | Page Spring | 1,000.0 GD |

| LICENCE NUMBER | FILE NUMBER | PURPOSE | SOURCE NAME | QUANTITY/UNIT |
|---|---|---|---|---|
| C031127 | 0267168 | DOM | Partridge Spring | 500.0 GD |
| F020334 | 0227187 | DOM | Paterson Spring | 500.0 GD |
| F044530 | 0263704 | DOM | Pease Lake | 500.0 GD |
| C049218 | 0340815 | DOM | Pease Lake | 500.0 GD |
| F017786 | 0116274 | DOM | Penwell Springs | 1,000.0 GD |
| F017784 | 0237131 | DOM | Penwell Springs | 1,000.0 GD |
| C036478 | 0296712 | DOM | Penwell Springs | 500.0 GD |
| F003484 | 0019756 | DOM | Porters Creek | 500.0 GD |
| F003407 | 0021066 | DOM | Porters Creek | 500.0 GD |
| F013458 | 0161296 | DOM | Porters Creek | 1,000.0 GD |
| F004948 | 0053873 | DOM | Prospect Lake | 500.0 GD |
| F006109 | 0060118 | DOM | Prospect Lake | 500.0 GD |
| F015393 | 0201648 | DOM | Prospect Lake | 500.0 GD |
| F017610 | 0218118 | DOM | Prospect Lake | 500.0 GD |
| F017164 | 0222031 | DOM | Prospect Lake | 500.0 GD |
| F018332 | 0225550 | DOM | Prospect Lake | 500.0 GD |
| F017329 | 0226541 | DOM | Prospect Lake | 500.0 GD |
| F044526 | 0247797 | DOM | Prospect Lake | 500.0 GD |
| F047423 | 0249567 | DOM | Prospect Lake | 500.0 GD |
| F049884 | 0273696 | DOM | Prospect Lake | 500.0 GD |
| C032898 | 0273854 | DOM | Prospect Lake | 500.0 GD |
| C032897 | 0277245 | DOM | Prospect Lake | 500.0 GD |
| C053880 | 0189155 | DOM | Rickenson Creek | 500.0 GD |
| C058340 | 0270985 | DOM | Robbins Swamp | 500.0 GD |
| F018692 | 0237824 | DOM | Rodd Spring | 1,000.0 GD |
| C033259 | 0277386 | DOM | Rodd Spring | 500.0 GD |
| C053850 | 0252988 | DOM | Ross Spring | 500.0 GD |
| C054616 | 0355452 | DOM | Ross Spring | 500.0 GD |
| F008408 | 0241167 | DOM | Rosslyn Spring | 1,000.0 GD |
| F021188 | 0229021 | DOM | Salmon Brook | 500.0 GD |
| F021187 | 0229022 | DOM | Salmon Brook | 500.0 GD |
| C026194 | 0233295 | DOM | Saul Spring | 1,000.0 GD |

| LICENCE NUMBER | FILE NUMBER | PURPOSE | SOURCE NAME | QUANTITY/UNIT |
|---|---|---|---|---|
| F047424 | 0277454 | DOM | Scudamore Spring | 500.0 GD |
| C053010 | 0365081 | DOM | Second Lake | 500.0 GD |
| F005206 | 0241161 | DOM | Selleck Creek | 500.0 GD |
| C063911 | 1000493 | DOM | Shortt Spring | 1,000.0 GD |
| F049271 | 0346008 | DOM | South Neaves Spring | 250.0 GD |
| C046726 | 0329173 | DOM | Sparton Brook | 150.0 GD |
| C054762 | 0365360 | DOM | Sparton Brook | 150.0 GD |
| F008333 | 0065449 | DOM | Stephen Creek | 500.0 GD |
| F015409 | 0179763 | DOM | Sylvia Spring | 1,500.0 GD |
| F020382 | 0211064 | DOM | Tapping Spring | 500.0 GD |
| F053853 | 207862 | DOM | Teanook Lake | 500.0 GD |
| F042108 | 317525 | DOM | Teanook Lake | 500.0 GD |
| C053414 | 365370 | DOM | Teanook Lake | 500.0 GD |
| C055266 | 367620 | DOM | Teanook Lake | 500.0 GD |
| C058583 | 368673 | DOM | Teanook Lake | 500.0 GD |
| C056135 | 0364582 | DOM | Third Lake | 2,000.0 GD |
| F018276 | 0232178 | DOM | Tod Creek | 500.0 GD |
| C026190 | 0232499 | DOM | Tod Creek | 500.0 GD |
| F070372 | 0216214 | DOM | Trav Spring | 500.0 GD |
| C041759 | 0194249 | DOM | Travers Creek | 500.0 GD |
| C041760 | 0317542 | DOM | Travers Creek | 500.0 GD |
| C051105 | 0341944 | DOM | Umpoola Swamp | 500.0 GD |
| F012652 | 0155512 | DOM | Valleyview Spring | 500.0 GD |
| C036779 | 0290472 | DOM | Vellacott Springs | 500.0 GD |
| C041280 | 0316547 | DOM | Vellacott Springs | 500.0 GD |
| C053332 | 0355424 | DOM | Waller Springs | 500.0 GD |
| C023801 | 0216634 | DOM | Waterfront Springs | 500.0 GD |
| C026928 | 0236650 | DOM | Waterfront Springs | 1,000.0 GD |
| C044434 | 0281101 | DOM | Watson Springs | 500.0 GD |
| C044436 | 0328575 | DOM | Watson Springs | 500.0 GD |
| F015421 | 0158939 | DOM | West Brook | 1,000.0 GD |
| F019901 | 0218294 | DOM | Young Spring | 500.0 GD |

| LICENCE NUMBER | FILE NUMBER | PURPOSE | SOURCE NAME | QUANTITY/UNIT |
|---|---|---|---|---|
| | | | Total | 124,800.0 GD |
| C107150 | 0215717 | IFROS | Blenkinsop Lake | 23.0 AF |
| C055336 | 0364959 | IFROS | Farley Creek | 90.0 AF |
| F020404 | 0254755 | IFROS | Kennel Brook | 20.0 AF |
| C065826 | 1000922 | IFROS | Mure Brook | 46.0 AF |
| | | | Total | 179.0 AF |
| C105595 | 0364822 | ISW | Meadlands Spring | 2,500.0 GD |
| | | | Total | 2,500.0 GD |
| C021328 | 0197864 | IRR | Airport Creek | 20.0 AF |
| C034309 | 0281460 | IRR | Airport Creek | 40.0 AF |
| C031446 | 0270039 | IRR | Albert Swamp | 2.0 AF |
| C024027 | 0217566 | IRR | Anderson Brook | 2.0 AF |
| F021190 | 0220991 | IRR | Anderson Brook | 2.0 AF |
| C046482 | 0329163 | IRR | Andrassy Brook | 1.0 AF |
| F017915 | 0224697 | IRR | Ardmore Spring No.1 | 5.0 AF |
| C032804 | 0273460 | IRR | Arne Ponds | 20.0 AF |
| C047010 | 0329229 | IRR | Bacon Brook | 3.0 AF |
| C034240 | 0281800 | IRR | Bartlett Spring | 8.0 AF |
| C031763 | 0270391 | IRR | Bear Hill Spring | 2.0 AF |
| C049013 | 0330895 | IRR | Beckwith Pond | 4.025 AF |
| F011024 | 0129003 | IRR | Bee Creek | 17.0 AF |
| C047892 | 0330199 | IRR | Benes Creek | 0.5 AF |
| F016513 | 0188264 | IRR | Blenkinsop Lake | 10.0 AF |
| C053369 | 0188413 | IRR | Blenkinsop Lake | 6.0 AF |
| F039428 | 0193063 | IRR | Blenkinsop Lake | 8.0 AF |
| C107149 | 0194861 | IRR | Blenkinsop Lake | 25.0 AF |
| F016611 | 0194861 | IRR | Blenkinsop Lake | 25.0 AF |
| C047549 | 0214179 | IRR | Blenkinsop Lake | 4.25 AF |
| F017198 | 0214686 | IRR | Blenkinsop Lake | 17.0 AF |
| C023701 | 0215717 | IRR | Blenkinsop Lake | 23.0 AF |
| C053533 | 0233996 | IRR | Blenkinsop Lake | 4.8 AF |
| C047347 | 0251632 | IRR | Blenkinsop Lake | 5.8 AF |

| LICENCE NUMBER | FILE NUMBER | PURPOSE | SOURCE NAME | QUANTITY/UNIT |
|---|---|---|---|---|
| C048554 | 0340083 | IRR | Blenkinsop Lake | 4.6 AF |
| C047348 | 0340528 | IRR | Blenkinsop Lake | 4.2 AF |
| C053370 | 0346642 | IRR | Blenkinsop Lake | 4.0 AF |
| C053534 | 0346691 | IRR | Blenkinsop Lake | 10.0 AF |
| C042924 | 0317184 | IRR | Bolton Swamp | 0.5 AF |
| C055589 | 0146157 | IRR | Burke Spring | 0.3 AF |
| C062788 | 0277093 | IRR | Butchart Creek | 5.0 AF |
| C050343 | 0330748 | IRR | Buys Ballot Swamp | 5.0 AF |
| C035890 | 0290532 | IRR | Central Creek | 1.0 AF |
| C061371 | 0203390 | IRR | Chalet Creek | 2.7 AF |
| F020344 | 0246888 | IRR | Chambers Spring | 3.0 AF |
| C033189 | 0277084 | IRR | Chew Spring | 17.5 AF |
| F016425 | 0190257 | IRR | Christmas Hill Sprg | 5.0 AF |
| F017535 | 0140083 | IRR | Colquitz River | 0.5 AF |
| F015182 | 0143045 | IRR | Colquitz River | 0.5 AF |
| F016655 | 0192867 | IRR | Colquitz River | 1.0 AF |
| F053274 | 0346647 | IRR | Colquitz River | 0.13 AF |
| C106188 | 0221871 | IRR | Colwood Lake | 50.0 AF |
| C045128 | 0328435 | IRR | Cub Spring | 1.0 AF |
| C101144 | 1001362 | IRR | Daisy Brook | 30.0 AF |
| F046311 | 0254161 | IRR | Daly Spring | 1.5 AF |
| C048374 | 0135570 | IRR | David Springs #1 | 5.0 AF |
| C048377 | 0341562 | IRR | David Springs #1 | 10.8 AF |
| C101055 | 1001119 | IRR | David Springs #2 | 4.9 AF |
| F012816 | 0078189 | IRR | Dean Brook | 39.0 AF |
| F016902 | 0078189 | IRR | Dean Brook | 8.0 AF |
| F014673 | 0191821 | IRR | Dominion Brook | 5.0 AF |
| C060783 | 0305896 | IRR | Durrance Lake | 15.0 AF |
| C069466 | 0341879 | IRR | Durrell Creek | 3.0 AF |
| C051476 | 0341463 | IRR | Estate Brook | 6.0 AF |
| C045127 | 0328434 | IRR | Estate Spring | 2.0 AF |
| C067928 | 0270865 | IRR | Fairburn Springs | 24.58 AF |

| LICENCE NUMBER | FILE NUMBER | PURPOSE | SOURCE NAME | QUANTITY/UNIT |
|---|---|---|---|---|
| C068146 | 0346360 | IRR | Fairburn Springs | 5.42 AF |
| F004988 | 0045735 | IRR | Finlayson Spring | 3.0 AF |
| C046274 | 0270274 | IRR | Gardner Creek | 0.33 AF |
| C035289 | 0285914 | IRR | Glen Lake | 1.0 AF |
| C047721 | 0330989 | IRR | Glen Lake | 0.25 AF |
| C047891 | 0340011 | IRR | Glen Lake | 0.25 AF |
| C054869 | 0365761 | IRR | Glen Lake | 0.25 AF |
| C043730 | 0190170 | IRR | Goward Spring Creek | 0.53 AF |
| C032522 | 0270921 | IRR | Goward Spring Creek | 1.0 AF |
| F014457 | 0150351 | IRR | Graham Creek | 3.5 AF |
| C070916 | 0157007 | IRR | Graham Creek | 1.39 AF |
| C070914 | 0179530 | IRR | Graham Creek | 3.09 AF |
| C020416 | 0190719 | IRR | Graham Creek | 90.0 AF |
| F044527 | 0197024 | IRR | Graham Creek | 0.9 AF |
| F046311 | 0254161 | IRR | Graham Creek | 1.5 AF |
| C035514 | 0290100 | IRR | Graham Creek | 5.0 AF |
| F044346 | 0290202 | IRR | Graham Creek | 5.7 AF |
| C045130 | 0328176 | IRR | Graham Creek | 1.0 AF |
| C046275 | 0328402 | IRR | Graham Creek | 0.25 AF |
| C070917 | 1000895 | IRR | Graham Creek | 0.66 AF |
| C070915 | 1000896 | IRR | Graham Creek | 1.46 AF |
| F020344 | 0246888 | IRR | Green Spring | 3.0 AF |
| F014454 | 0143410 | IRR | Griffin Spring | 2.5 AF |
| F015506 | 0158137 | IRR | Hagan Creek | 60.0 AF |
| F014828 | 0179528 | IRR | Hagan Creek | 10.0 AF |
| F015504 | 0191043 | IRR | Hagan Creek | 25.0 AF |
| F016170 | 0196567 | IRR | Hagan Creek | 10.0 AF |
| C053242 | 0263071 | IRR | Hagan Creek | 22.0 AF |
| C065717 | 1000714 | IRR | Harrop Pond | 4.0 AF |
| C065738 | 1000749 | IRR | Harrop Pond | 8.0 AF |
| C055117 | 0355797 | IRR | Hollyridge Pond | 1.0 AF |
| C057498 | 0367723 | IRR | Holt Creek | 10.0 AF |

| LICENCE NUMBER | FILE NUMBER | PURPOSE | SOURCE NAME | QUANTITY/UNIT |
|---|---|---|---|---|
| C057496 | 0367727 | IRR | Holt Creek | 5.0 AF |
| C045758 | 0329920 | IRR | Irene Spring | 3.1 AF |
| C044723 | 0317788 | IRR | Island View Springs | 4.5 AF |
| C044724 | 0317789 | IRR | Island View Springs | 3.0 AF |
| C044725 | 0317790 | IRR | Island View Springs | 2.5 AF |
| C068145 | 0267807 | IRR | Jack Swamp | 10.0 AF |
| C064733 | 0290357 | IRR | Joann Brook | 0.67 AF |
| C058755 | 1000035 | IRR | Kathgar Brook | 2.0 AF |
| C050341 | 0340055 | IRR | Kennel Brook | 13.5 AF |
| C058649 | 0368852 | IRR | Kerry Brook | 2.0 AF |
| F018337 | 0223305 | IRR | Kingsberry Pond | 1.0 AF |
| F016901 | 0078843 | IRR | Knox Brook | 4.5 AF |
| C061362 | 1000354 | IRR | Lagoona Brook | 0.25 AF |
| C061363 | 1000362 | IRR | Lagoona Brook | 0.25 AF |
| C047722 | 0330675 | IRR | Laitinen Swamp | 0.25 AF |
| C047723 | 0330676 | IRR | Laitinen Swamp | 0.25 AF |
| C053416 | 0364414 | IRR | Laitinen Swamp | 4.0 AF |
| F047921 | 0330668 | IRR | Lamont Spring | 1.0 AF |
| C036271 | 0220607 | IRR | Lavern Brook | 5.75 AF |
| C036353 | 0285886 | IRR | Lavern Brook | 1.25 AF |
| C036272 | 0290897 | IRR | Lavern Brook | 5.25 AF |
| F020344 | 0246888 | IRR | Lawrence Spring | 3.0 AF |
| F016629 | 0189977 | IRR | Maber Springs | 80.0 AF |
| F015489 | 0135845 | IRR | MacKay Spring | 0.65 AF |
| C058339 | 0207506 | IRR | Mah Brook | 4.5 AF |
| C058335 | 0370246 | IRR | Mah Brook | 7.0 AF |
| F016672 | 0208230 | IRR | Mah Springs | 6.5 AF |
| C039027 | 0309453 | IRR | McCarthy Swamp | 2.6 AF |
| C039028 | 0309453 | IRR | McCarthy Swamp | 2.6 AF |
| F015612 | 0053066 | IRR | McHugh Ditch | 2.25 AF |
| F015613 | 0053066 | IRR | McHugh Ditch | 7.75 AF |
| C054088 | 0182617 | IRR | McHugh Ditch | 19.0 AF |

| LICENCE NUMBER | FILE NUMBER | PURPOSE | SOURCE NAME | QUANTITY/UNIT |
|---|---|---|---|---|
| C020295 | 0189479 | IRR | McHugh Ditch | 5.0 AF |
| F016901 | 0078843 | IRR | McMillan Brook | 4.5 AF |
| C072280 | 1001189 | IRR | Meadlands Spring | 3.5 AF |
| F044026 | 0281176 | IRR | Mikosch Spring | 11.3 AF |
| C044028 | 0328533 | IRR | Mikosch Spring | 4.3 AF |
| C051454 | 0341374 | IRR | Milko Spring | 1.0 AF |
| F008349 | 0095442 | IRR | Miller Brook | 3.0 AF |
| F015203 | 0153358 | IRR | Montrose Spring | 1.7 AF |
| C059093 | 0367756 | IRR | Munn Creek | 1.5 AF |
| F018301 | 0232110 | IRR | Mure Brook | 25.0 AF |
| C065833 | 1000957 | IRR | Mure Brook | 20.0 AF |
| C042505 | 0317830 | IRR | Newton Brook | 0.5 AF |
| F020029 | 0217718 | IRR | Nixon Spring | 1.25 AF |
| F020029 | 0217718 | IRR | Nixon Spring | 2.5 AF |
| F015554 | 0188948 | IRR | Noble Creek | 20.0 AF |
| C033190 | 0277502 | IRR | Noble Creek | 0.5 AF |
| C050523 | 0305126 | IRR | Noble Creek | 5.0 AF |
| C050343 | 0330748 | IRR | North Neaves Spr #1 | 5.0 AF |
| C050343 | 0330748 | IRR | North Neaves Spr #2 | 5.0 AF |
| C050343 | 0330748 | IRR | North Neaves Spr #3 | 5.0 AF |
| C049217 | 0241166 | IRR | North Neaves Spr #1 | 6.0 AF |
| C049217 | 0241166 | IRR | North Neaves Spr #2 | 6.0 AF |
| C049217 | 0241166 | IRR | North Neaves Spr #3 | 6.0 AF |
| F016805 | 0198428 | IRR | North Pond | 30.0 AF |
| F018200 | 0204702 | IRR | O'Donnel Creek | 0.25 AF |
| F020029 | 0217718 | IRR | Oud Spring | 1.25 AF |
| C024159 | 0218981 | IRR | Page Spring | 10.0 AF |
| F020334 | 0227187 | IRR | Paterson Spring | 3.0 AF |
| C032841 | 0273461 | IRR | Pedersen Pond | 20.0 AF |
| C051098 | 0234087 | IRR | Peel Brook | 4.2 AF |
| C051102 | 0346258 | IRR | Peel Brook | 0.6 AF |
| C039532 | 0309355 | IRR | Pleasance Brook | 1.5 AF |

| LICENCE NUMBER | FILE NUMBER | PURPOSE | SOURCE NAME | QUANTITY/UNIT |
|---|---|---|---|---|
| C043835 | 0316910 | IRR | Pleasance Brook | 0.5 AF |
| C053348 | 0364347 | IRR | Pleasance Brook | 0.25 AF |
| F018275 | 0232161 | IRR | Porters Creek | 2.0 AF |
| F049561 | 0243540 | IRR | Prospect Lake | 0.03 AF |
| F049560 | 0245590 | IRR | Prospect Lake | 0.09 AF |
| F049885 | 0245909 | IRR | Prospect Lake | 0.3 AF |
| F049269 | 0247523 | IRR | Prospect Lake | 0.08 AF |
| C058482 | 0369486 | IRR | Rainsford Spring | 9.0 AF |
| C032254 | 0270177 | IRR | Rashleigh Brook | 10.0 AF |
| C049215 | 0340263 | IRR | Rashleigh Brook | 10.0 AF |
| C072278 | 1001122 | IRR | Rendall Pond | 5.0 AF |
| F008347 | 0071931 | IRR | Rey Springs | 60.0 AF |
| F008348 | 0074943 | IRR | Rey Springs | 24.0 AF |
| C072637 | 1000767 | IRR | Riptide Pond | 15.0 AF |
| C058340 | 0270985 | IRR | Robbins Swamp | 12.5 AF |
| C058336 | 0370248 | IRR | Robbins Swamp | 3.5 AF |
| F008408 | 0241167 | IRR | Rosslyn Spring | 8.0 AF |
| F020344 | 0246888 | IRR | Ruth Spring | 3.0 AF |
| F021187 | 0229022 | IRR | Salmon Brook | 1.0 AF |
| F014248 | 0143014 | IRR | Sandhill Creek | 4.0 AF |
| C103853 | 0184980 | IRR | Sandhill Creek | 2.5 AF |
| F015264 | 0185378 | IRR | Sandhill Creek | 1.0 AF |
| F016292 | 0186812 | IRR | Sandhill Creek | 5.0 AF |
| F016293 | 0186812 | IRR | Sandhill Creek | 10.0 AF |
| C021552 | 0199531 | IRR | Sandhill Creek | 3.5 AF |
| F017996 | 0199988 | IRR | Sandhill Creek | 1.66 AF |
| F018568 | 0202678 | IRR | Sandhill Creek | 25.0 AF |
| F017201 | 0211223 | IRR | Sandhill Creek | 1.5 AF |
| F018402 | 0232160 | IRR | Sandhill Creek | 4.0 AF |
| C027731 | 0244678 | IRR | Sandhill Creek | 5.0 AF |
| C027730 | 0246309 | IRR | Sandhill Creek | 1.66 AF |
| F017997 | 0246310 | IRR | Sandhill Creek | 1.66 AF |

| LICENCE NUMBER | FILE NUMBER | PURPOSE | SOURCE NAME | QUANTITY/UNIT |
|---|---|---|---|---|
| F018492 | 0255137 | IRR | Sandhill Creek | 1.5 AF |
| C052942 | 0341943 | IRR | Sandhill Creek | 5.3 AF |
| C065789 | 1000799 | IRR | Sandhill Creek | 11.0 AF |
| C065137 | 0365386 | IRR | Sandowne Brook | 2.5 AF |
| C055237 | 0365470 | IRR | Sandowne Brook | 4.0 AF |
| C049480 | 0340733 | IRR | Sandys Spring | 10.0 AF |
| F016951 | 0168144 | IRR | Sayward Spring | 2.0 AF |
| F005205 | 0241161 | IRR | Selleck Creek | 6.0 AF |
| F005206 | 0241161 | IRR | Selleck Creek | 3.0 AF |
| C063911 | 1000493 | IRR | Shortt Spring | 1.75 AF |
| C050341 | 0340055 | IRR | South Neaves Spring | 13.5 AF |
| F049271 | 0346008 | IRR | South Neaves Spring | 4.5 AF |
| C046726 | 0329173 | IRR | Sparton Brook | 3.0 AF |
| C054762 | 0365360 | IRR | Sparton Brook | 7.0 AF |
| C101071 | 1001282 | IRR | Spence Spring | 20.0 AF |
| F015429 | 0135127 | IRR | Stokes Spring | 4.5 AF |
| C044964 | 0323980 | IRR | Storrs Creek | 0.5 AF |
| C026753 | 0236206 | IRR | Swan Lake | 3.0 AF |
| F020385 | 0257314 | IRR | Swan Springs | 3.85 AF |
| C050343 | 0330748 | IRR | Sylvia Spring | 5.0 AF |
| F020382 | 0211064 | IRR | Tapping Spring | 1.5 AF |
| C039645 | 0309654 | IRR | Tatlow Brook | 0.25 AF |
| F021492 | 0222327 | IRR | Thomson Brook | 3.0 AF |
| C063549 | 0069709 | IRR | Tod Creek | 19.0 AF |
| C063550 | 0241168 | IRR | Tod Creek | 22.5 AF |
| C060783 | 0305896 | IRR | Tod Creek | 15.0 AF |
| C043141 | 0322458 | IRR | Townsend Spring | 2.5 AF |
| F015385 | 0182602 | IRR | Travers Creek | 27.0 AF |
| C106199 | 0317948 | IRR | Trevlac Pond | 0.5 AF |
| C054764 | 0355064 | IRR | Tveita Pond | 0.75 AF |
| C051105 | 0341944 | IRR | Umpoola Swamp | 8.0 AF |
| C059091 | 0367405 | IRR | Verhagen Spring | 2.5 AF |

| LICENCE NUMBER | FILE NUMBER | PURPOSE | SOURCE NAME | QUANTITY/UNIT |
|---|---|---|---|---|
| F017202 | 0189835 | IRR | Wallace Ditch | 5.0 AF |
| F017196 | 0208619 | IRR | Wallace Ditch | 15.0 AF |
| C064084 | 1000654 | IRR | Waller Springs | 4.0 AF |
| C023801 | 0216634 | IRR | Waterfront Spring | 0.5 AF |
| C030495 | 0263393 | IRR | Wells Swamp | 7.0 AF |
| C036634 | 0296910 | IRR | West Brook | 12.0 AF |
| C045128 | 0328435 | IRR | Whiskey Ditch | 1.0 AF |
| F016697 | 0199705 | IRR | Wilfloma Pond | 10.0 AF |
| F016698 | 0199705 | IRR | Wilfloma Pond | 5.0 AF |
| F019897 | 0193402 | IRR | Woodcote Spring | 10.0 AF |
| F016612 | 0199685 | IRR | Wray Creek | 0.3 AF |
| F016589 | 0193190 | IRR | Young Spring | 8.0 AF |
| | | | Total | 1,751.215 AF |
| C065796 | 0305091 | LDIMP | Beaver Lake | 2,800.0 AF |
| C049841 | 0340734 | LDIMP | Blenkinsop Creek | 0.0 TF |
| C035286 | 0285308 | LDIMP | Burnham Brook | 0.0 TF |
| C101089 | 1001177 | LDIMP | Burnham Brook | 17.0 AF |
| C072292 | 1001292 | LDIMP | Buxton Brook | 0.1 AF |
| F060782 | 0263009 | LDIMP | Chalet Creek | 0.64 AF |
| C042929 | 0322143 | LDIMP | Chalet Creek | 100.0 GD |
| C045295 | 0305969 | LDIMP | Colquitz River | 100.0 GD |
| F053274 | 0346647 | LDIMP | Colquitz River | 500.0 GD |
| C054452 | 0355875 | LDIMP | Colquitz River | 100.0 GD |
| F051927 | 0323107 | LDIMP | Dianne Ditch | 1,040.0 GD |
| C041935 | 0317298 | LDIMP | Dominion Brook | 80.0 GD |
| C050522 | 0340965 | LDIMP | Dominion Brook | 0.0 TF |
| C053138 | 0364273 | LDIMP | Dominion Brook | 200.0 GD |
| C060785 | 0322253 | LDIMP | Durrance Lake | 209.0 AF |
| C044261 | 0322251 | LDIMP | Eagles Lake | 42.0 AF |
| C029482 | 0257399 | LDIMP | Earsman Brook | 0.0 TF |
| C055338 | 0364959 | LDIMP | Farley Creek | 0.0 TF |
| C058480 | 1000085 | LDIMP | Foden Pond # 2 | 11.0 AF |

| LICENCE NUMBER | FILE NUMBER | PURPOSE | SOURCE NAME | QUANTITY/UNIT |
|---|---|---|---|---|
| C058480 | 1000085 | LDIMP | Foden Pond # 3 | 11.0 AF |
| C061374 | 1000250 | LDIMP | Gardner Creek | 6.0 AF |
| C039026 | 0309198 | LDIMP | Graham Creek | 0.5 AF |
| C063903 | 1000419 | LDIMP | Graham Creek | 1.5 AF |
| F014741 | 0168568 | LDIMP | Hagar Spring | 0.0 TF |
| C057664 | 0369677 | LDIMP | Herrington Spr #1 | 4.0 AF |
| F016871 | 0177206 | LDIMP | Hobbs Creek | 0.0 TF |
| C072644 | 1000869 | LDIMP | Hobbs Creek | 0.1 AF |
| C032521 | 0273030 | LDIMP | Kingsberry Pond | 300.0 GD |
| C065133 | 0305059 | LDIMP | Lagoona Brook | 0.1 AF |
| C061364 | 1000362 | LDIMP | Lagoona Brook | 1,000.0 GD |
| F015490 | 0135845 | LDIMP | Mackay Spring | 500.0 GD |
| F018237 | 0225518 | LDIMP | Mill Rd Ditch | 500.0 GD |
| C014943 | 0143252 | LDIMP | Mill Stream | 40.0 AF |
| C018495 | 0172037 | LDIMP | Mill Stream | 0.0 TF |
| F018235 | 0218818 | LDIMP | Mill Stream | 0.0 TF |
| C024312 | 0219603 | LDIMP | Mill Stream | 0.0 TF |
| C056802 | 0355910 | LDIMP | Nordwall Spring | 7.5 AF |
| C101089 | 1001177 | LDIMP | North Burnham Brook | 8.5 AF |
| C070685 | 0223976 | LDIMP | Prentice Brook | 0.5 AF |
| C101089 | 1001177 | LDIMP | South Burnham Brook | 8.5 AF |
| C064325 | 0365359 | LDIMP | Sparton Brook | 0.0 TF |
| F021628 | 0290928 | LDIMP | Thetis Lake | 1,285.0 AF |
| | | | Total | 5499.0 AF |
| C061478 | 1000428 | PONDS | Blenkinsop Lake | 14,000.0 GD |
| C061475 | 1000244 | PONDS | Brooks Spring | 0.2 AF |
| C063957 | 1000565 | PONDS | Busko Springs | 0.6 AF |
| C065799 | 0231645 | PONDS | Hudson Brook | 4.0 AF |
| C032523 | 0270621 | PONDS | Meadowbrook Spring | 2.0 AF |
| C032523 | 0270621 | PONDS | Travers Creek | 0.6 AF |
| C064084 | 1000654 | PONDS | Waller Springs | 1.0 AF |
| | | | Total | 8.400 AF |

| LICENCE NUMBER | FILE NUMBER | PURPOSE | SOURCE NAME | QUANTITY/UNIT |
|---|---|---|---|---|
| C030936 | 0266749 | PROCE | Peatt Swamp | 100,000.0 GD |
| | | | Total | 100,000.0 GD |
| C034310 | 0281460 | STONP | Airport Creek | 20.0 AF |
| F020384 | 0233985 | STONP | Allan Spring | 18.0 AF |
| C046483 | 0329163 | STONP | Andrassy Brook | 1.0 AF |
| C047011 | 0329229 | STONP | Bacon Brook | 3.33 AF |
| C049014 | 0330895 | STONP | Beckwith Pond | 4.25 AF |
| C060678 | 0342389 | STONP | Blenkinsop Creek | 64.0 AF |
| C101089 | 1001177 | STONP | Burnham Brook | 13.5 AF |
| C062788 | 0277093 | STONP | Butchart Creek | 3.5 AF |
| C050344 | 0330748 | STONP | Buys Ballot Swamp | 1.5 AF |
| C035891 | 0290532 | STONP | Central Creek | 0.5 AF |
| C106188 | 0221871 | STONP | Colwood Lake | 50.0 AF |
| C045129 | 0328435 | STONP | Cub Spring | 1.0 AF |
| C101144 | 1001362 | STONP | Daisy Brook | 30.0 AF |
| C048373 | 0296193 | STONP | David Spring #1 | 0.4 AF |
| C048378 | 0341562 | STONP | David Spring #1 | 0.85 AF |
| C060784 | 0305896 | STONP | Durrance Creek | 30.0 AF |
| C069466 | 0341879 | STONP | Durrell Creek | 3.0 AF |
| C051477 | 0341463 | STONP | Estate Brook | 6.0 AF |
| C045133 | 0328434 | STONP | Estate Spring | 2.0 AF |
| C055337 | 0364959 | STONP | Farley Creek | 90.0 AF |
| C055526 | 0366322 | STONP | Farley Creek | 0.67 AF |
| C035515 | 0290100 | STONP | Graham Creek | 2.0 AF |
| C045131 | 0328176 | STONP | Graham Creek | 1.0 AF |
| C046276 | 0328402 | STONP | Graham Creek | 0.25 AF |
| F015505 | 0191043 | STONP | Hagan Creek | 25.0 AF |
| C054412 | 0355546 | STONP | Hartley Pond | 1.0 AF |
| C055118 | 0355797 | STONP | Hollyridge Pond | 1.0 AF |
| C057499 | 0367723 | STONP | Holt Creek | 10.0 AF |
| C057497 | 0367727 | STONP | Holt Creek | 5.0 AF |
| C065799 | 0231645 | STONP | Hudson Brook | 4.0 AF |

| LICENCE NUMBER | FILE NUMBER | PURPOSE | SOURCE NAME | QUANTITY/UNIT |
|---|---|---|---|---|
| C068145 | 0267807 | STONP | Jack Swamp | 5.0 AF |
| C064733 | 0290357 | STONP | Joann Brook | 0.5 AF |
| C058756 | 1000035 | STONP | Kathgar Brook | 1.6 AF |
| C058650 | 0368852 | STONP | Kerry Brook | 2.67 AF |
| C053417 | 0364414 | STONP | Laitinen Swamp | 4.0 AF |
| F047922 | 0330668 | STONP | Lamont Spring | 1.0 AF |
| C036354 | 0285886 | STONP | Lavern Brook | 6.0 AF |
| C072280 | 1001189 | STONP | Meadlands Spring | 3.5 AF |
| F044027 | 0238785 | STONP | Mikosch Spring | 3.6 AF |
| C044029 | 0328533 | STONP | Mikosch Spring | 1.4 AF |
| C059094 | 0367756 | STONP | Munn Creek | 1.6 AF |
| F018302 | 0232110 | STONP | Mure Brook | 6.0 AF |
| C065826 | 1000922 | STONP | Mure Brook | 32.0 AF |
| C065833 | 1000957 | STONP | Mure Brook | 20.0 AF |
| C042506 | 0317830 | STONP | Newton Brook | 0.5 AF |
| C101089 | 1001177 | STONP | North Burnham Brook | 6.75 AF |
| C050344 | 0330748 | STONP | North Neaves Spr #1 | 1.5 AF |
| C050344 | 0330748 | STONP | North Neaves Spr #2 | 1.5 AF |
| C050344 | 0330748 | STONP | North Neaves Spr #3 | 1.5 AF |
| C030937 | 0266749 | STONP | Peatt Swamp | 40.0 AF |
| C051099 | 0234087 | STONP | Peel Brook | 4.2 AF |
| C051103 | 0346258 | STONP | Peel Brook | 0.6 AF |
| C061338 | 1000172 | STONP | Penwell Springs | 1.0 AF |
| C039533 | 0309355 | STONP | Pleasance Brook | 1.5 AF |
| C043836 | 0316910 | STONP | Pleasance Brook | 0.5 AF |
| C053349 | 0364347 | STONP | Pleasance Brook | 0.25 AF |
| F003408 | 0021066 | STONP | Porters Creek | 0.05 AF |
| C058483 | 0369486 | STONP | Rainsford Spring | 2.0 AF |
| C032255 | 0270177 | STONP | Rashleigh Brook | 10.0 AF |
| C049216 | 0340263 | STONP | Rashleigh Brook | 10.0 AF |
| C072278 | 1001122 | STONP | Rendall Pond | 5.0 AF |
| C072637 | 1000767 | STONP | Riptide Pond | 15.0 AF |

| LICENCE NUMBER | FILE NUMBER | PURPOSE | SOURCE NAME | QUANTITY/UNIT |
|---|---|---|---|---|
| C103853 | 0184980 | STONP | Sandhill Creek | 2.5 AF |
| C027732 | 0244678 | STONP | Sandhill Creek | 5.0 AF |
| C052943 | 0341943 | STONP | Sandhill Creek | 7.0 AF |
| C065789 | 1000799 | STONP | Sandhill Creek | 11.0 AF |
| C055238 | 0365470 | STONP | Sandowne Brook | 4.0 AF |
| C049481 | 0340733 | STONP | Sandys Spring | 5.0 AF |
| C063912 | 1000493 | STONP | Shortt Spring | 1.75 AF |
| C101089 | 1001177 | STONP | South Burnham Brook | 6.75 AF |
| C050342 | 0340055 | STONP | South Neaves Spring | 3.5 AF |
| C046727 | 0329173 | STONP | Sparton Brook | 3.1 AF |
| C054763 | 0365360 | STONP | Sparton Brook | 7.1 AF |
| C101071 | 1001282 | STONP | Spence Spring | 20.0 AF |
| C044965 | 0323980 | STONP | Storrs Creek | 0.5 AF |
| F020385 | 0257314 | STONP | Swan Springs | 3.0 AF |
| C050344 | 0330748 | STONP | Sylvia Spring | 1.5 AF |
| C062790 | 0241169 | STONP | Tod Creek | 22.5 AF |
| F019601 | 0193829 | STONP | Travers Creek | 27.0 AF |
| C054765 | 0355064 | STONP | Tveita Pond | 0.75 AF |
| C051106 | 0341944 | STONP | Umpoola Swamp | 8.0 AF |
| C059092 | 0367405 | STONP | Verhagen Spring | 2.5 AF |
| F017197 | 0208619 | STONP | Wallace Ditch | 10.0 AF |
| C064084 | 1000654 | STONP | Waller Springs | 1.0 AF |
| C036635 | 0296910 | STONP | West Brook | 12.0 AF |
| C045129 | 0328435 | STONP | Whiskey Ditch | 1.0 AF |
| | | | Total | 749.92 AF |
| F020383 | 0233985 | WTRNG | Allan Spring | 18.0 AF |
| C101089 | 1001177 | WTRNG | Burnham Brook | 22.5 AF |
| F039430 | 0237106 | WTRNG | Colquitz River | 0.3 AF |
| C035964 | 0290299 | WTRNG | Colwood Lake | 32.5 AF |
| C101089 | 1001177 | WTRNG | North Burnham Brook | 11.25 AF |
| C101089 | 1001177 | WTRNG | South Burnham Brook | 11.25 AF |
| | | | Total | 95.8 AF |

| LICENCE NUMBER | FILE NUMBER | PURPOSE | SOURCE NAME | QUANTITY/UNIT |
|---|---|---|---|---|
| 23114 | 0209747 | WWKLA | Brentwood Springs | 300,000.0 GD |
| F021629 | 0290929 | WWKLA | Elk Lake | 1,536,000 GD |
| C027027 | 0236636 | WWKLA | Quarry Lake | 200,000.0 GD |
| | | | Total | 2,536,000 GD |

# APPENDIX F

## Applications for Water Licenses

| LICENCE NUMBER | FILE NUMBER | PURPOSE | SOURCE NAME | | QUANTITY/UNIT |
|---|---|---|---|---|---|
| Z105586 | 1001621 | DOM | Eagles Lake | | 500.0 GD |
| Z105197 | 1001601 | DOM | Waterfront Springs | | 500.0 GD |
| Z106745 | 1001678 | DOM | ZZ Spring | | 500.0 GD |
| Z106834 | 1001693 | DOM | ZZ Spring | | 1000.0 GD |
| | | | | Total | 2500.0 GD |
| Z101339 | 1001412 | IRR | Niblick Swamp | | 0.5 AF |
| Z101087 | 1001150 | IRR | Quarry Lake | | 48.0 AF |
| | | | | Total | 48.5 AF |
| Z103956 | 1001530 | LDIMP | ZZ Brook | | 1.0 AF |
| Z104118 | 1001540 | LDIMP | ZZ Brook | | 1.0 AF |
| Z105225 | 1001604 | LDIMP | ZZ Creek | | 1.0 AF |
| Z101066 | 1001281 | LDIMP | ZZ Pond | | 1.0 AF |
| | | | | Total | 4.0 AF |
| Z101043 | 1001059 | WTRNG | Prospect Lake | | 40.0 AF |
| | | | | Total | 100.0 AF |
| Z101339 | 1001412 | STONP | Niblick Swamp | | 0.5 AF |
| Z101087 | 1001150 | STONP | Quarry Lake | | 48.0 AF |
| | | | | Total | 48.5 AF |